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DISTRIBUTION OF PHYTOPLANKTON IN GEORGIA LAKES

Environmental Monitoring and Support Laboratory
Office of Research and Development
U.S. Environmental Protection Agency
Las Vegas, Nevada 89114

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This is a data report presenting the species and abundance of phytoplankton in the 14 lakes sampled by the National Eutrophication Survey in the State of Georgia. Results from the calculation of several water quality indices are also included (Nygaard's Trophic State Index, Palmer's Organic Pollution Index, and species diversity and abundance indices).

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DISTRIBUTION OF PHYTOPLANKTON IN GEORGIA LAKES

by

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FOREWORD

Protection of the environment requires effective regulatory actions which are based on sound technical and scientific information. This information must include the quantitative description and linking of pollutant sources, transport mechanisms, interactions, and resulting effects on man and his environment. Because of the complexities involved, assessment of specific pollutants in the environment requires a total systems approach which transcends the media of air, water, and land. The Environmental Monitoring and Support Laboratory-Las Vegas contributes to the formation and enhancement of a sound integrated monitoring data base through multidisciplinary, multimedia programs designed to:

- develop and optimize systems and strategies for monitoring pollutants and their impact on the environment
- demonstrate new monitoring systems and technologies by applying them to fulfill special monitoring needs of the Agency's operating programs

This report presents the species and abundance of phytoplankton in the 14 lakes sampled by the National Eutrophication Survey in the State of Georgia, along with results from the calculation of several commonly used biological indices of water quality and community structure. These data can be used to biologically characterize the study lakes, and as baseline data for future investigations. This report was written for use by Federal, State, and local governmental agencies concerned with water quality analysis, monitoring, and/or regulation. Private industry and individuals similarly involved with the biological aspects of water quality will find the document useful. For further information contact the Water and Land Quality Branch, Monitoring Operations Division.

George B. Morgan
Director
Environmental Monitoring and Support Laboratory
Las Vegas

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INTRODUCTION

The collection and analysis of phytoplankton data were included in the National Eutrophication Survey in an effort to determine relationships between algal characteristics and trophic status of individual lakes.

During spring, summer, and fall of 1973, the Survey sampled 250 lakes in 17 States. Over 700 algal species and varieties were identified and enumerated from the 743 water samples examined.

This report presents the species and abundance of phytoplankton in the 14 lakes sampled in the State of Georgia (Table 1). The Nygaard's Trophic State (Nygaard 1949), Palmer's Organic Pollution (Palmer 1969), and species diversity and abundance indices are also included.

TABLE 1. LAKES SAMPLED IN THE STATE OF GEORGIA

STORET #	LAKE NAME	COUNTY
1301	Allatoona	Cherokee, Bartow, Cobb
1302	Blackshear Lake	Crisp, Sumter, Lee
1303	Chatuge Lake	Towns (Clay in Tenn.)
1304	Clark Hill Reservoir	Columbia, Lincoln, Elbert (Edgefield, McCormick in S.C.)
1309	Jackson Lake	Butts, Jasper, Newton
1310	Lake Sidney Lanier	Hall, Forsyth, Dawson
1311	Nottley Lake	Union
1312	Lake Seminole (Jim Woodruff Reservoir	Decature, Seminole (Jackson, Gadsen in Fla.)
1313	Lake Sinclair	Baldwin, Hancock
1314	Lake Eufaula (Walter F. George Reservoir)	Quitman, Clay, Stewart (Henry, Barbour, Russell in Ala.)

TABLE 1. LAKES SAMPLED IN THE STATE OF GEORGIA (Continued)

STORET #	LAKE NAME	COUNTY
1316	Blue Ridge Lake	Fannin
1317	Bartlett's Ferry Reservoir (Harding Lake)	Harris (Lee in Ala.)
1318	Lake Burton	Rabun
1319	High Falls Lake	Monroe

MATERIALS AND METHODS

LAKE AND SITE SELECTION

Lakes and reservoirs included in the Survey were selected through discussions with State water pollution agency personnel and U.S. Environmental Protection Agency Regional Offices (U.S. Environmental Protection Agency 1975). Screening and selection strongly emphasized lakes with actual or potential accelerated eutrophication problems. As a result, the selection was limited to lakes:

(1) impacted by one or more municipal sewage treatment plant outfalls either directly into the lake or by discharge to an inlet tributary within approximately 40 kilometers of the lake;

(2) 40 hectares or larger in size; and

(3) with a mean hydraulic retention time of at least 30 days.

Specific selection criteria were waived for some lakes of particular State interest.

Sampling sites for a lake were selected based on available information on lake morphometry, potential major sources of nutrient input, and on-site judgment of the field limnologist (U.S. Environmental Protection Agency 1975). Primary sampling sites were chosen to reflect the deepest portion of each major basin in a test lake. Where many basins were present, selection was guided by nutrient source information on hand. At each sampling site, a depth-integrated phytoplankton sample was taken. Depth-integrated samples were uniform mixtures of water from the surface to a depth of 15 feet (4.6 meters) or from the surface to the lower limit of the photic zone representing 1 percent of the incident light, whichever was greater. If the depth at the sampling site was less than 15 feet (4.6 meters), the sample was taken from just off the bottom to the surface. Normally, a lake was sampled three times in 1 year, providing information on spring, summer, and fall conditions.

SAMPLE PREPARATION

Four milliliters (ml) of Acid-Lugol's solution (Prescott 1970) were added to each 130-ml sample from each site at the time of collection for preservation. The samples were shipped to the Environmental Monitoring and Support Laboratory, Las Vegas, Nevada, where equal volumes from each site were mixed to form two 130-ml composite samples for a given lake. One composite sample was put into storage and the other was used for the examination.

Prior to examination, the composite samples were concentrated by the settling method. Solids were allowed to settle for at least 24 hours prior to siphoning off the supernate. The volume of the removed supernate and the volume of the remaining concentrate were measured and concentrations determined. A small (8 ml) library subsample of the concentrate was then taken. The remaining concentrate was gently agitated to resuspend the plankton and poured into a capped, graduated test tube. If a preliminary examination of a sample indicated the need for a more concentrated sample, the contents of the test tube were further concentrated by repeating the settling method. Final concentrations varied from 15 to 40 times the original.

Permanent slides were prepared from concentrated samples after analysis was complete. A drop of superconcentrate from the bottom of the test tube was placed in a ring of clear Karo®Corn Syrup with phenol (a few crystals of phenol were added to each 100 ml of syrup) on a glass slide, thoroughly mixed, and topped with a coverglass. After the syrup at the edges of the coverglass had hardened, the excess was scraped away and the mount was sealed with clear fingernail polish. Permanent diatom slides were prepared by drying sample material on a coverglass, heating in a muffle furnace at 400° C for 45 minutes, and mounting in Hyrax®. Finally, the mounts were sealed with clear fingernail polish.

Backup samples, library samples, permanent sample slides, and Hyrax®-mounted diatom slides are being stored and maintained at the U.S. Environmental Monitoring and Support Laboratory-Las Vegas.

EXAMINATION

The phytoplankton samples were examined with the aid of binocular compound microscopes. A preliminary examination was performed to precisely identify and list all forms encountered. The length of this examination varied depending on the complexity of the sample. An attempt was made to find and identify all of the forms present in each sample. Often forms were observed which could not be identified to species or to genus. Abbreviated descriptions were used to keep a record of these forms (e.g., lunate cell, blue-green filament, Navicula #1). Diatom slides were examined using a standard light microscope. If greater resolution was essential to accurately identify the diatoms, a phase-contrast microscope was used.

After the species list was compiled, phytoplankton were enumerated using a Neubauer Counting Chamber with a 40X objective lens and a 10X ocular lens. All forms within each field were counted. The count was continued until a minimum of 100 fields had been viewed, or until the dominant form had been observed a minimum of 100 times.

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QUALITY CONTROL

Internal quality control checks on species identifications and counts were performed on a regular basis between project phycologists at the rate of 7 percent. Although an individual had primary responsibility for analyzing a sample, taxonomic problems were discussed among the phycologists.

Additional quality control checks were performed on the Survey samples by Dr. G. W. Prescott of the University of Montana at the rate of 5 percent. Quality control checks were made on 75 percent of these samples to verify species identifications while checks were made on the remaining 25 percent of the samples to verify genus counts. Presently, the agreement between quality control checks for species identification and genus enumerations is satisfactory.

RESULTS

The Appendix summarizes all of the phytoplankton data collected from the State by the Survey. It is organized by lake, including an alphabetical phytoplankton species list with concentrations for individual species given by sampling date. Results from the application of several indices are presented (Nygaard's Trophic State, Palmer's Organic Pollution, and species diversity and abundance). Each lake has been assigned a four digit STORET number. [STORET (STOrage and RETrieval) is the U.S. Environmental Protection Agency's computer system which processes and maintains water quality data.] The first two digits of the STORET number identify the State; the last two digits identify the lake.

NYGAARD'S TROPHIC STATE INDICES

Five indices devised by Nygaard (1949) were proposed under the assumption that certain algal groups are indicative of levels of nutrient enrichment. These indices were calculated in order to aid in determining the surveyed lakes' trophic status. As a general rule, Cyanophyta, Euglenophyta, centric diatoms, and members of the Chlorococcales are found in waters that are eutrophic (rich in nutrients), while desmids and many pennate diatoms generally cannot tolerate high nutrient levels and so are found in oligotrophic waters (poor in nutrients).

In applying the indices to the Survey data, the number of taxa in each major group was determined from the species list for each sample. The ratios of these groups give numerical values which can be used as a biological index of water richness. The five indices and the ranges of values established for Danish lakes by Nygaard for each trophic state are presented in Table 2. The appropriate symbol, (E) eutrophic and (O) oligotrophic, follows each calculated value in the tables in the Appendix. A question mark (?) was entered in these tables when the calculated value was within the range of both classifications.

PALMER'S ORGANIC POLLUTION INDICES

Palmer (1969) analyzed reports from 165 authors and developed algal pollution indices for use in rating water samples with high organic pollution. Two lists of organic pollution-tolerant forms were prepared, one containing 20 genera, the other, 20 species (Tables 3 and 4). Each form was assigned a pollution index number ranging from 1 for moderately tolerant forms to 6 for extremely tolerant forms. Palmer based the index numbers on occurrence records and/or where emphasized by the authors as being especially tolerant of organic pollution.

TABLE 2. NYGAARD'S TROPHIC STATE INDICES ADAPTED FROM HUTCHINSON (1967)

Index	Calculation	Oligotrophic	Eutrophic
Myxophycean	$\frac{\text{Myxophyceae}}{\text{Desmideae}}$	0.0-0.4	0.1-3.0
Chlorophycean	$\frac{\text{Chlorococcales}}{\text{Desmideae}}$	0.0-0.7	0.2-9.0
Diatom	$\frac{\text{Centric Diatoms}}{\text{Pennate Diatoms}}$	0.0-0.3	0.0-1.75
Euglenophyte	$\frac{\text{Euglenophyta}}{\text{Myxophyceae + Chlorococcales}}$	0.0-0.3	0.0-1.0
Compound	$\frac{\text{Myxophyceae + Chlorococcales + Centric Diatoms + Euglenophyta}}{\text{Desmideae}}$	0.0-1.0	1.2-25

TABLE 3. ALGAL GENUS POLLUTION INDEX (Palmer 1969)

Genus	Pollution Index
Anacystis	1
Ankistrodesmus	2
Chlamydomonas	4
Chlorella	3
Closterium	1
Cyclotella	1
Euglena	5
Gomphonema	1
Lepocinclis	1
Melosira	1
Micractinium	1
Navicula	3
Nitzschia	3
Oscillatoria	5
Pandorina	1
Phacus	2
Phormidium	1
Scenedesmus	4
Stigeoclonium	2
Synedra	2

TABLE 4. ALGAL SPECIES POLLUTION INDEX (Palmer 1969)

Species	Pollution Index
Ankistrodesmus falcatus	3
Arthrospira jenneri	2
Chlorella vulgaris	2
Cyclotella meneghiniana	2
Euglena gracilis	1
Euglena viridis	6
Gomphonema parvulum	1
Melosira varians	2
Navicula cryptocephala	1
Nitzschia acicularis	1
Nitzschia palea	5
Oscillatoria chlorina	2
Oscillatoria limosa	4
Oscillatoria princeps	1
Oscillatoria putrida	1
Oscillatoria tenuis	4
Pandorina morum	3
Scenedesmus quadricauda	4
Stigeoclonium tenue	3
Syndra ulna	3

In analyzing a water sample, any of the 20 genera or species of algae present in concentrations of 50 per milliliter or more are recorded. The pollution index numbers of the algae present are totaled, providing a genus score and a species score. Palmer determined that a score of 20 or more for either index can be taken as evidence of high organic pollution, while a score of 15 to 19 is taken as probable evidence of high organic pollution. Lower figures suggest that the organic pollution of the sample is not high, that the sample is not representative, or that some substance or factor interfering with algal persistence is present and active.

SPECIES DIVERSITY AND ABUNDANCE INDICES

"Information content" of biological samples is being used commonly by biologists as a measure of diversity. Diversity in this connection means the degree of uncertainty attached to the specific identity of any randomly selected individual. The greater the number of taxa and the more equal their proportions, the greater the uncertainty, and hence, the diversity (Pielou 1966). There are several methods of measuring diversity, e.g., the formulas given by Brillouin (1962) and Shannon and Weaver (1963). The method which is appropriate depends on the type of biological sample on hand.

Pielou (1966) classifies the types of biological samples and gives the measure of diversity appropriate for each type. The Survey phytoplankton samples are what she classifies as larger samples (collections in Pielou's terminology) from which random subsamples can be drawn. According to Pielou, the average diversity per individual for these types of samples can be estimated from the Shannon-Wiener formula (Shannon and Weaver 1963):

$$H = -\sum_{i=1}^{S} P_i \log_x P_i$$

where P is the proportion of the ith taxon in the sample, which is calculated from n_i/N; n_i is the number of individuals per milliliter of the ith taxon; N is the total number of individuals per ml; and S is the total number of taxa.

However, Basharin (1959) and Pielou (1966) have pointed out that H calculated from the subsample is a biased estimator of the sample H, and if this bias is to be accounted for, we must know the total number of taxa present in the sample since the magnitude of this bias depends on it.

Pielou (1966) suggests that if the number of taxa in the subsample falls only slightly short of the number in the larger sample, no appreciable error will result in considering S. estimated from the subsample, as being equal to the sample value. Even though considerable effort was made to find and identify all taxa, the Survey samples undoubtedly contain a fair number of rare phytoplankton taxa which were not encountered.

In the Shannon-Wiener formula, an increase in the number of taxa and/or an increase in the evenness of the distribution of individuals among taxa will increase the average diversity per individual from its minimal value of zero. Sager and Hasler (1969) found that the richness of taxa was of minor importance in determination of average diversity per individual for phytoplankton and they concluded that phytoplankton taxa in excess of the 10 to 15 most abundant ones have little effect on H, which was verified by our own calculations. Our counts are in number per milliliter and since logarithms to the base 2 were used in our calculations, H is expressed in units of bits per individual. When individuals of a taxon were so rare that they were not counted, a value of 1/130 per milliliter or 0.008 per milliliter was used in the calculations since at least one individual of the taxon must have been present in the collection.

A Survey sample for a given lake represents a composite of all phytoplankton collected at different sampling sites on a lake during a given sampling period. Since the number of samples (M) making up a composite is a function of both the complexity of the lake sampled and its size, it should affect the richness-of-taxa component of the diversity of our phytoplankton collections. The maximum diversity (MaxH) (i.e., when the individuals are distributed among the taxa as evenly as possible) was estimated from $\log_2 S$, the total diversity (D) was calculated from HN, and the evenness component of diversity (J) was estimated from H/MaxH (Pielou 1966). Also given in the Appendix are L (the mean number of individuals per taxa per milliliter) and K (the number of individuals per milliliter of the most abundant taxon in the sample).

Zand (1976) suggests that diversity indices be expressed in units of "sits", i.e., in logarithms to base S (where S is the total number of taxa in the sample) instead of in "bits", i.e., in logarithms to base 2. Zand points out that the diversity index in sits per individual is a normalized number ranging from 1 for the most evenly distributed samples to 0 for the least evenly distributed samples. Also, it can be used to compare different samples, independent of the number of taxa in each. The diversity in bits per individual should not be used in direct comparisons involving various samples which have different numbers of species. Since MaxH equals log S, the expression in sits is equal to $\log_S S$, or 1. Therefore diversity in sits per individual is numerically equivalent to J, the evenness component for the Shannon-Wiener formula.

SPECIES OCCURRENCE AND ABUNDANCE

The alphabetic phytoplankton species list for each lake, presented in the Appendix, gives the concentrations of individual species by sampling date. Concentrations are in cells, colonies, or filaments (CEL, COL, FIL) per milliliter. An "X" after a species name indicates the presence of the species on that date in such a low concentration that it did not show up in the count. A blank space indicates that the organism was not found in the sample collected on that date. Column S is used to designate the examiner's subjective opinion of the five dominant taxa in a sample, based upon relative size and concentration of the organism. The percent column (%C) presents, by abundance, the percentage composition of each taxon.

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APPENDIX. SUMMARY OF PHYTOPLANKTON DATA

This appendix was generated by computer. Because it was only possible to use upper case letters in the printout, all scientific names are printed in upper case and are not italicized.

The alphabetic phytoplankton lists include taxa without species names (e.g., EUNOTIA, EUNOTIA #1, FLAGELLATE, FLAGELLATES, MICROSYSTIS INCERTA ?, CHLOROPHYTAN COCCOID CELLED COLONY). When species determinations were not possible, symbols or descriptive phrases were used to separate taxa for enumeration purposes. Each name on a list, however, represents a unique species different from any other name on the same list, unless otherwise noted, for counting purposes.

Numbers were used to separate unidentified species of the same genus. A generic name listed alone is also a unique species. A question mark (?) is placed immediately after the portion of a name which was assigned with uncertainty. Numbered, questioned, or otherwise designated taxa were established on a lake-by-lake basis; therefore NAVICULA #2 from lake A cannot be compared to NAVICULA #2 from lake B. Pluralized categories (e.g., FLAGELLATES, CENTRIC DIATOMS, SPP.) were used for counting purposes when taxa could not be properly differentiated on the counting chamber.

LAKE NAME: ALLATOONA
STORET NUMBER: 1301

NYGAARD TROPHIC STATE INDICES

DATE	06 30 73	09 17 73	11 12 73
MYXOPHYCEAN	3.50 E	4.50 E	05/0 E
CHLOROPHYCEAN	1.50 E	1.50 E	03/0 E
EUGLENOPHYTE	0.40 E	0.33 E	0.33 E
DIATOM	2.00 E	0.40 E	1.00 E
COMPOUND	9.00 E	9.00 E	17/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 30 73	09 17 73	11 12 73
GENUS	05	08	04
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 30 73	09 17 73	11 12 73
AVERAGE DIVERSITY	H	2.86	2.66	3.24
NUMBER OF TAXA	S	29.00	31.00	29.00
NUMBER OF SAMPLES COMPOSITED	M	6.00	6.00	6.00
MAXIMUM DIVERSITY	MAXH	4.86	4.95	4.86
TOTAL DIVERSITY	D	5834.40	47499.62	9295.56
TOTAL NUMBER OF INDIVIDUALS/ML	N	2040.00	17857.00	2865.00
EVENESS COMPONENT	J	0.59	0.54	0.67
MEAN NUMBER OF INDIVIDUALS/TAXA	L	70.34	576.03	98.93
NUMBER/ML OF MOST ABUNDANT TAXON	K	908.00	7411.00	792.00

LAKE NAME: ALLATCONA
STORET NUMBER: 1301

CONTINUED

TAXA	FORM	06 30 73 S	06 30 73 %C	06 30 73 ALGAL UNITS PER ML	09 17 73 S	09 17 73 %C	09 17 73 ALGAL UNITS PER ML	11 12 73 S	11 12 73 %C	11 12 73 ALGAL UNITS PER ML
ACHNANTHES MICROCEPHALA	CEL				3	5.0	889			X
ANABAENA #1	FIL	1	44.5	908		2.9	518			X
ANABAENA #2	FIL		2.2	45						X
APHANIZOMENON ?	FIL									
ASCOGLENA	CEL			X						
CENTRIC DIATOM	CEL							5	6.6	189
CERATIUM HIRUNDINELLA	CEL			X						
CHILOMONAS PARAMAECIUM	CEL		2.2	45						
CHLAMYDOMONAS	CEL						X			
CHROOCOCCUS	COL			X	4	3.3	592			
CRUCIGENIA TETRAPEDIA	COL			X						X
CRYPTOMONAS	CEL		2.2	45	5	2.5	445	4	6.6	189
CRYPTOMONAS EROSA	CEL						X			
CYANOPHYTAN FILAMENT	FIL			X						
CYCLOTELLA	CEL					0.8	148			
CYCLOTELLA STELLIGERA	CEL			X					5.3	151
CYMBELLA	CEL					0.8	148			
CYMBELLA VENTRICOSA	CEL						X			
DACTYLOCOCCOPSIS	CEL		2.2	45					6.6	189
DACTYLOCOCCOPSIS IRREGULARIS ?	CEL						X			
DINOBRYON SERTULARIA	CEL			X						
EUCAPSIS ?	CEL						X			
EUGLENA	CEL			X			X			
EUGLENA ACUS	CEL					0.4	74			
EUGLENA GRACILIS	CEL									X
FLAGELLATE #1	CEL					1.7	296		3.9	113
FLAGELLATE #2	CEL								6.6	189
GLENODINIUM	CEL			X						
GOLENKINIA	CEL						X			
KIRCHNERIELLA	CEL					1.7	296			X
LYNGBYA	FIL		5.7	136						
LYNGBYA SUBTILIS	FIL				2	29.1	5188			

LAKE NAME: ALLATCONA
STORET NUMBER: 1301

CONTINUED

TAXA	FORM	06 30 73 S	06 30 73 %C	06 30 73 ALGAL UNITS PER ML	09 17 73 S	09 17 73 %C	09 17 73 ALGAL UNITS PER ML	11 12 73 S	11 12 73 %C	11 12 73 ALGAL UNITS PER ML
MALLOMONAS	CEL		2.2	45		0.4	74			X
MELOSIRA AMBIGUA	CEL	4	6.7	136						
MELOSIRA DISTANS	CEL	2	8.9	182				1	27.6	792
MELOSIRA GRANULATA	CEL			X		0.8	148			
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL							2	18.4	528
MELOSIRA ITALICA	CEL								3.9	113
MERISMOPEDIA	COL		6.7	136						
MERISMOPEDIA ?	COL					2.9	519			
MERISMOPEDIA TENUISSIMA	COL						X			
MESOSTIGMA VIRIDIS	CEL								1.3	38
MICROCYSTIS INCERTA	COL								1.3	38
NITZSCHIA	CEL								1.3	38
OSCILLATORIA	FIL								1.3	38
PANDORINA MORUM	COL									X
PENNATE DIATOM	CEL					1.2	222			
PERIDINIUM INCONSPICUUM	CEL					2.1	371			
PERIDINIUM PUSILLUM	CEL									X
PERIDINIUM WISCONSINENSE	CEL	3	6.7	136						
PHACUS HELIKOIDES	CEL									X
PHACUS SPIROGYRA	FIL						X			
RAPHIDIOPSIS	FIL				1	41.5	7411			
RAPHIDIOPSIS CURVATA ?	FIL						X			
SCENEDESMUS #1	COL	5	6.7	136						
SCENEDESMUS DENTICULATUS	COL									X
SCENEDESMUS PROTUBERANS	COL			X						
SCENEDESMUS QUADRICAUDA	COL						X			
STAURASTRUM #1	CEL			X		1.2	222			
STAURASTRUM #2	CEL			X			X			
SYNEDRA ?	CEL		2.2	45						
SYNEDRA #1	CEL									X
SYNEDRA #2	CEL							3	9.2	264

LAKE NAME: ALLATCNA
STORET NUMBER: 1301

CONTINUED

TAXA	FORM	06 30 73 S	%C	ALGAL UNITS PER ML	09 17 73 S	%C	ALGAL UNITS PER ML	11 12 73 S	%C	ALGAL UNITS PER ML
TABELLARIA	CEL					1.7	296			
TABELLARIA FENESTRATA	CEL			X						X
TRACHELOMONAS	CEL						X			
TRACHELOMONAS #1	CEL			X						
TRACHELCMONAS #2	CEL			X						
TRACHELCMONAS #3	CEL									X
TCTAL				2040			17857			2969

LAKE NAME: BLACKSHEAR LAKE
STORET NUMBER: 1302

NYGAARD TROPHIC STATE INDICES

DATE	06 22 73	09 07 73	11 08 73
MYXOPHYCEAN	02/0 E	2.00 E	5.00 E
CHLOROPHYCEAN	01/0 E	1.00 E	3.00 E
EUGLENOPHYTE	1.00 E	0/03 ?	0/08 ?
DIATOM	2.00 E	0.33 E	0.25 ?
COMPOUND	08/0 E	4.00 E	9.00 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 22 73	09 07 73	11 08 73
GENUS	00	07	04
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 22 73	09 07 73	11 08 73
AVERAGE DIVERSITY	H	1.93	2.26	2.52
NUMBER OF TAXA	S	12.00	10.00	18.00
NUMBER OF SAMPLES COMPOSITED	M	4.00	4.00	3.00
MAXIMUM DIVERSITY	MAXH	3.58	3.32	4.17
TOTAL DIVERSITY	D	79.13	499.46	1804.32
TOTAL NUMBER OF INDIVIDUALS/ML	N	41.00	221.00	716.00
EVENESS COMPONENT	J	0.54	0.68	0.60
MEAN NUMBER OF INDIVIDUALS/TAXA	L	3.42	22.10	39.78
NUMBER/ML OF MOST ABUNDANT TAXON	K	17.00	55.00	281.00

LAKE NAME: BLACKSHEAR LAKE
STORET NUMBER: 1302

CONTINUED

TAXA	FORM	06 22 73 S	%C	ALGAL UNITS PER ML	09 07 73 S	%C	ALGAL UNITS PER ML	11 08 73 S	%C	ALGAL UNITS PER ML
ASTERIONELLA FORMOSA	CEL				4	12.7	28			
CHLAMYDOMONAS	CEL									X
CHROOCOCCUS	COL							2	21.8	156
CHRYSOPHYTAN COCCOID CELL	CEL	2	41.5	17						
COSMARIUM	CEL								4.3	31
CRYPTOMONAS ?	CEL								4.3	31
CYANOPHYTAN FILAMENTS	FIL									X
CYMBELLA	CEL									X
DACTYLOCOCCOPSIS	CEL									X
DINOBRYON SOCIALE	CEL				5	12.7	28			
EUASTRUM	CEL						X			
EUGLENA	CEL			X						
EUGLENA ACUS	CEL	1	19.5	8						
EUNOTIA	CEL									X
FLAGELLATE #1	CEL	4	19.5	8						
FLAGELLATE #9	CEL									X
KIRCHNERIELLA	CEL							1	39.2	28
LYNGBYA LIMNETICA	FIL						X			X
MALLOMONAS	CEL							3	8.7	62
MELOSIRA	CEL						X			
MELOSIRA DISTANS ?	CEL			X						
MELOSIRA VARIANS	CEL									X
NAVICULA	CEL							5	8.7	62
NEIDIUM DUBIUM	CEL						X			
OSCILLATORIA #1	FIL			X	1	24.9	55			
OSCILLATORIA #2	FIL			X						
PEDIASTRUM SIMPLEX	COL			X						
PENNATE DIATOM	CEL									X
PERIDINIUM	CEL			X						
PERICINIUM INCONSPICUUM	CEL						X			
RAPHIDIOPSIS	FIL							4	8.7	62
SCENEDESMUS ?	COL									X

LAKE NAME: BLACKSHEAR LAKE
STORET NUMBER: 1302

CONTINUED

TAXA	FORM	06 22 73 S	%C	ALGAL UNITS PER ML	09 07 73 S	%C	ALGAL UNITS PER ML	11 08 73 S	%C	ALGAL UNITS PER ML
SCHROEDERIA	CEL				3	24.9	55			
STAURONEIS CRUCICULA	CEL	3	19.5	R						
STEPHANODISCUS	CEL			X						
SYNEDRA #1	CEL				2	24.9	55			
TETRASTRUM HETERACANTHUM	CEL							4.3		31
TRACHELOMONAS URCEOLATA	CEL			X						
TOTAL				41			221			716

LAKE NAME: CHATUCE LAKE
STORET NUMBER: 1303

NYGAARD TROPHIC STATE INDICES

DATE	06 29 73	09 17 73	11 10 73
MYXOPHYCEAN	03/0 E	10/0 E	05/0 E
CHLOROPHYCEAN	01/0 E	02/0 E	0/0 O
EUGLENOPHYTE	0.25 E	0.17 ?	0/05 ?
DIATOM	0.43 E	0.36 E	0.78 E
COMPOUND	08/0 E	18/0 E	12/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 29 73	09 17 73	11 10 73
GENUS	05	06	01
SPECIES	CO	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 29 73	09 17 73	11 10 73
AVERAGE DIVERSITY	H	3.11	2.68	3.09
NUMBER OF TAXA	S	26.00	41.00	29.00
NUMBER OF SAMPLES COMPOSITED	M	6.00	5.00	6.00
MAXIMUM DIVERSITY	MAXH	4.70	5.36	4.86
TOTAL DIVERSITY	D	3371.24	10827.20	2567.79
TOTAL NUMBER OF INDIVIDUALS/ML	N	1084.00	4040.00	831.00
EVENESS COMPONENT	J	0.66	0.50	0.64
MEAN NUMBER OF INDIVIDUALS/TAXA	L	41.69	98.54	28.65
NUMBER/ML OF MOST ABUNDANT TAXON	K	322.00	1897.00	287.00

LAKE NAME: CHATUCE LAKE
STORET NUMBER: 1303

CONTINUED

TAXA	FORM	05 29 73 S	05 29 73 %C	05 29 73 ALGAL UNITS PER ML	09 17 73 S	09 17 73 %C	09 17 73 ALGAL UNITS PER ML	11 10 73 S	11 10 73 %C	11 10 73 ALGAL UNITS PER ML
ACHNANTHES MICROCEPHALA	CEL						X			
AMPHIPRORA	CEL									X
ANABAENA	FIL					1.5	60			
ANABAENA #1	FIL	5	4.6	50			X	1	34.5	287
ANABAENA PLANCTONICA	FIL					0.5	22		1.9	16
APHANIZOMENON FLOS-AQUAE	FIL				4	8.6	349			
APHANOCAPSA	COL					1.7	70			
ASTERIONELLA FORMOSA	CEL	4	6.5	70						
CENTRIC DIATOM #1	CEL							4	9.6	80
CHLAMYDOMONAS	CEL					1.7	69			
CHLOROPHYTAN CELL	CEL								1.9	16
CHROOCOCCUS	COL				1	14.6	590			
COCCONEIS	CEL						X			
COELOSPHAERIUM NAEGELIANUM	COL									X
CRYPTOMONAS	CEL		0.9	10						
CRYPTOMONAS EROSA	CEL					0.9	38			
CYANOPHYTAN COCCOID CELLED COLONY	CEL					1.3	52			
CYCLOTELLA STELLIGERA	CEL		3.7	40						X
CYMBELLA	CEL						X			X
DINOBRYON BAVARICUM	CEL			X		0.4	15			X
DINOBRYON SERTULARIA	CEL			X			X		3.9	32
DINOFLAGELLATE	CEL									X
DINOFLAGELLATES	CEL	2	21.3	231						
EUGLENA	CEL					0.2	10			
FLAGELLATE	CEL	1							1.9	16
FLAGELLATE #1	CEL		3.7	40		1.5	60			
FLAGELLATE #2	CEL						X			
FRAGILARIA ?	CEL						X			
GLENODINIUM	CEL									X
GLOEOCYSTIS VESICULOSA	CCL						X			
GYMNODINIUM	CEL						X			
GYMNODINIUM NEGLECTUM	CEL			X						

LAKE NAME: CHATUGE LAKE
STORET NUMBER: 1303

CONTINUED

TAXA	FORM	06 29 73 S	06 29 73 %C	06 29 73 ALGAL UNITS PER ML	09 17 73 S	09 17 73 %C	09 17 73 ALGAL UNITS PER ML	11 10 73 S	11 10 73 %C	11 10 73 ALGAL UNITS PER ML
GYROSIGMA	CEL						X			
GYROSIGMA ?	CEL									X
LEPOCINCLIS	CEL			X						
LYNGBYA	FIL								3.9	32
LYNGBYA LIMNETICA	FIL				2	47.0	1897			
LYNGBYA SUBTILIS	FIL									X
MALLOMONAS	CEL		1.8	20		0.7	28			X
MELOSIRA	CEL		3.7	40			X			
MELOSIRA #2	CEL								3.9	32
MELOSIRA #3	CEL							3	5.8	48
MELOSIRA DISTANS	CEL							5	7.7	64
MELOSIRA DISTANS ?	CEL				5	2.9	116			
MELOSIRA GRANULATA	CEL			X		1.3	52			X
MELOSIRA ISLANDICA	CEL						X			
MELOSIRA ITALICA	CEL							2	17.3	144
MERISMOPEDIA	COL						X			
NAVICULA	CEL						X			X
NITZSCHIA #1	CEL						X			X
OOCYSTIS	CEL		1.8	20						
OSCILLATORIA	FIL									
OSCILLATORIA #2	FIL	1	29.7	322			X			
OSCILLATORIA GEMINATA ?	FIL			X						
PEDIASTRUM TETRAS V. TETRAODON	COL									
PERIDINIUM	CEL						X			
PERIDINIUM INCONSPICUUM	CEL			X		0.9	37		3.9	32
PERIDINIUM WISCONSINENSE	CEL			X		0.4	15			
PLANULARIA	CEL			X		0.4	15			
ROYA ?	CEL									X
SCHROEDERIA	CEL		6.5	70						
SURIRELLA	CEL					0.4	15			
SYNEDRA ? #1	CEL			X						
	CEL								1.9	16

LAKE NAME: CHATUGE LAKE
STORET NUMBER: 1303

CONTINUED

TAXA	FORM	06 29 73 S	06 29 73 %C	06 29 73 ALGAL UNITS PER ML	09 17 73 S	09 17 73 %C	09 17 73 ALGAL UNITS PER ML	11 10 73 S	11 10 73 %C	11 10 73 ALGAL UNITS PER ML
SYNEDRA #1	CEL		3.7	40			X			
SYNEDRA #2	CEL					0.4	15			X
SYNEDRA ACUS	CEL			X						
SYNEDRA ULNA	CEL			X						
TABELLARIA FENESTRATA	CEL	3	11.2	121	3	12.7	515		1.9	16
TABELLARIA FLOCCULOSA	CEL		0.9	10			X			
TRACHELOMONAS VOLVOCINA	CEL						X			
TOTAL				1084			4040			831

LAKE NAME: CLARK HILL RES.
STORET NUMBER: 1304

NYGAARD TROPHIC STATE INDICES

DATE	06 23 73	09 08 73	11 12 73
MYXOPHYCEAN	3.50 E	2.00 E	5.00 E
CHLOROPHYCEAN	2.50 E	1.33 E	8.00 E
EUGLENOPHYTE	0/12 ?	0/10 ?	0.31 E
DIATOM	0.43 E	0.20 ?	1.00 E
COMPOUND	7.50 E	3.67 E	21.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 23 73	09 08 73	11 12 73
GENUS	11	15	06
SPECIES	00	03	04

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 23 73	09 08 73	11 12 73
AVERAGE DIVERSITY	H	4.02	2.92	2.87
NUMBER OF TAXA	S	27.00	25.00	32.00
NUMBER OF SAMPLES COMPOSITED	M	11.00	11.00	11.00
MAXIMUM DIVERSITY	MAXH	4.75	4.70	5.00
TOTAL DIVERSITY	D	11762.52	54045.28	4072.53
TOTAL NUMBER OF INDIVIDUALS/ML	N	2926.00	18509.00	1419.00
EVENESS COMPONENT	J	0.85	0.62	0.57
MEAN NUMBER OF INDIVIDUALS/TAXA	L	108.37	711.88	44.34
NUMBER/ML OF MOST ABUNDANT TAXON	K	491.00	6374.00	607.00

LAKE NAME: CLARK HILL RES.
STORET NUMBER: 1304

CONTINUED

TAXA	FORM	06 23 73 S	06 23 73 %C	06 23 73 ALGAL UNITS PER ML	09 08 73 S	09 08 73 %C	09 08 73 ALGAL UNITS PER ML	11 12 73 S	11 12 73 %C	11 12 73 ALGAL UNITS PER ML
ACHNANTHES	CEL									X
ACHNANTHES MICROCEPHALA	CEL		7.1	207		1.5	280			
ANABAENA #1	FIL		0.9	26					1.2	17
ANKISTRODESMUS	CEL									X
APHANIZOMENON	FIL	2	12.4	362						
BOTRYOCOCCUS	COL									X
CHLAMYDOMONAS	CEL					1.2	224			
CHLORELLA	CEL		1.8	52		0.9	168			
CHLOROPHYTAN COCCOID CELL	CEL					2.1	391			
CHROOCOCCUS	COL		2.7	78		2.7	503			X
CLOSTERIUM	CEL		0.9	26						
COSMARIUM	CEL					0.9	168			
CRUCIGENIA CRUCIFERA	COL									X
CRYPTOMONAS	CEL	3	9.7	285		0.9	168	4	8.5	121
CYANOPHYTAN COCCOID CELLED COLONY	CEL		5.3	155						
CYANOPHYTAN FILAMENTS	FIL		0.9	26						
CYCLOTELLA STELLIGERA	CEL		2.7	78					2.5	35
CYMBELLA	CEL			X						
CYSTODINIUM ?	CEL									X
DACTYLOCOCCOPSIS	CEL				4	6.9	1286	1	42.8	607
DINOBRYON BAVARICUM	CEL								1.2	17
EUASTRUM DENTICULATUM ?	CEL						X			
EUGLENA	CEL									X
EUGLENA ACUS ?	CEL									X
FLAGELLATE #1	CEL	5	6.2	181		3.0	559		4.9	69
FLAGELLATE #9	CEL						X			
GOLENKINIA	CEL		1.8	52					1.2	17
KIRCHNERIELLA	CEL		3.6	104		0.9	168			
LAGERHEIMIA	CEL									X
LAGERHEIMIA CITRIFORMIS	CEL						X			
LYNGBYA	FIL	1	16.8	491	2	26.9	4976			
LYNGBYA LIMNETICA	FIL							2	12.2	173

LAKE NAME: CLARK HILL RES.
STORET NUMBER: 1304

CONTINUED

TAXA	FORM	06 23 73 S	06 23 73 %C	06 23 73 ALGAL UNITS PER ML	09 08 73 S	09 08 73 %C	09 08 73 ALGAL UNITS PER ML	11 12 73 S	11 12 73 %C	11 12 73 ALGAL UNITS PER ML
MALLOMONAS	CEL					0.9	168	3	11.0	156
MELOSIRA	CEL									X
MELOSIRA DISTANS	CEL		2.7	78						X
MELOSIRA GRANULATA	CEL		4.4	129			X			X
MERISMOPEDIA	COL								2.5	35
MICROCYSTIS INCERTA	COL				5	6.3	1174			
NAVICULA	CEL						X			
NAVICULA SPP.	CEL		1.8	52						
NITZSCHIA HOLSATICA	CEL			X						
OSCILLATORIA	FIL				3	7.3	1342			
PEDIASTRUM DUPLEX V. GRACILIMUM	COL			X						
PENNATE DIATOM #1	CEL								1.2	17
PERIDINIUM INCONSPICUUM	CEL		3.6	104		0.9	168			
PERIDINIUM SPP.	CEL									X
PERIDINIUM WISCONSINENSE	CEL		1.8	52						
PHACUS	CEL									X
RAPHIDIOPSIS	FIL				1	34.4	6374			
RAPHIDIOPSIS CURVATA	FIL		4.4	129						
SCENEDESMUS	COL		0.9	26						
SCENEDESMUS BICAUDATUS	COL									X
SCENEDESMUS BIJUGA	COL								1.2	17
SCENEDESMUS INTERMEDIUS	COL						X			
SCENEDESMUS QUADRICAUDA	COL								3.7	52
STAURASTRUM	CEL									X
STAURASTRUM TETRACERUM	CEL		0.9	26		0.6	112			
STAURONEIS #1	CEL						X			
STAURONEIS #2	CEL						X			
SYNEDRA	CEL	4	7.1	207				5	4.9	69
SYNEDRA ULNA	CEL					1.5	280			
TABELLARIA FENESTRATA	CEL			X					1.2	17
TRACHELOMONAS URCEOLATA ?	CEL									X
TOTAL				2926			18509			1419

LAKE NAME: JACKSON LAKE
STORET NUMBER: 1309

NYGAARD TROPHIC STATE INDICES

DATE	07 01 73	09 08 73	11 13 73
MYXOPHYCEAN	7.50 E	10.0 E	1.25 E
CHLOROPHYCEAN	11.5 E	7.00 E	1.75 E
EUGLENOPHYTE	0.24 E	0/17 ?	0.17 ?
DIATOM	0.31 E	0.30 ?	0.25 ?
COMPOUND	25.5 E	20.0 E	4.00 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	07 01 73	09 08 73	11 13 73
GENUS	11	21	08
SPECIES	00	04	04

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		07 01 73	09 08 73	11 13 73
AVERAGE DIVERSITY	H	3.91	1.93	3.51
NUMBER OF TAXA	S	71.00	35.00	36.00
NUMBER OF SAMPLES COMPOSITED	M	4.00	4.00	5.00
MAXIMUM DIVERSITY	MAXH	6.15	5.13	5.17
TOTAL DIVERSITY	D	8512.07	50251.41	11702.34
TOTAL NUMBER OF INDIVIDUALS/ML	N	2177.00	26037.00	3334.00
EVENESS COMPONENT	J	0.64	0.38	0.68
MEAN NUMBER OF INDIVIDUALS/TAXA	L	30.66	743.91	92.61
NUMBER/ML OF MOST ABUNDANT TAXON	K	376.00	17771.00	662.00

LAKE NAME: JACKSON LAKE
STORET NUMBER: 1309

CONTINUED

TAXA	FORM	07 01 73 S	07 01 73 %C	07 01 73 ALGAL UNITS PER ML	09 08 73 S	09 08 73 %C	09 08 73 ALGAL UNITS PER ML	11 13 73 S	11 13 73 %C	11 13 73 ALGAL UNITS PER ML
ANABAENA #1	FIL								2.0	68
ANABAENA #2	FIL		1.9	42						
ANABAENA #3	FIL			X						
ANABAENA PLANCTONICA	FIL		0.6	14						
ANABAENA SPIROIDES	FIL	4	11.3	246						
ANABAENOPSIS	FIL				2	7.5	1555			
ANKISTRODESMUS	CEL			X				3	11.6	388
ANKISTRODESMUS FALCATUS	CEL		1.1	25						
APHANIZOMENON ?	FIL		5.0	109						
CERATIUM HIRUNDINELLA	CEL			X						
CHILOMONAS PARAMAECIUM	CEL			X					1.4	46
CHLAMYDOMONAS	CEL					0.3	89			
CHLORELLA	CEL					0.7	178			
CHLOROPHYTAN COCCOID CELL	CEL								8.2	274
CHRYSOPHYTAN COCCOID CELL	CEL								4.8	160
CLOSTERIUM MONILIFERUM	CEL									X
COELASTRUM SPHAERICUM	COL		2.4	53						
COSMARIUM	CEL						X		1.4	46
CRUCIGENIA APICULATA	COL			X						
CRUCIGENIA CRUCIFERA	COL			X						
CRYPTOMONAS	CEL				5	1.4	355			
CRYPTOMONAS EROSA	CEL							4	8.9	297
CYCLOTELLA	CEL					0.7	178			
CYCLOTELLA STELLIGERA	CEL		1.1	25						
DACTYLOCOCCOPSIS	CEL					1.7	444			
DIATOMA	CEL						X			
DICTYOSPHAERIUM PULCHELLUM	COL			X						
DIACBRYON	CEL			X						
DINOFLAGELLATE #1	CEL		0.3	7						
EUGLENA	CEL		0.5	10						
EUNOTIA	CEL			X						
FLAGELLATE #1	CEL								0.7	23

LAKE NAME: JACKSON LAKE
STORET NUMBER: 1309

CONTINUED

TAXA	FORM	07 01 73 S	07 01 73 %C	07 01 73 ALGAL UNITS PER ML	09 08 73 S	09 08 73 %C	09 08 73 ALGAL UNITS PER ML	11 13 73 S	11 13 73 %C	11 13 73 ALGAL UNITS PER ML
FLAGELLATES	CEL		1.8	39						
FRANCEIA	CEL			X						
GLENODINIUM	CEL									X
GOLENKINIA	CEL			X						
GOLENKINIA RADIATA	CEL								0.7	23
GOMPHONEMA	CEL						X			
GYMNODINIUM	CEL									X
GYROSIGMA	CEL						X			
LEPOCINCLIS ACUTA ?	CEL			X						
LYNGBYA	FIL					1.7	444			
MALLOMONAS	CEL					1.0	267			
MELOSIRA DISTANS	CEL			X			X		4.8	160
MELOSIRA GRANULATA	CEL		1.0	21			X			X
MERISMOPEDIA	COL			X	4	2.7	711			
MERISMOPEDIA TENUISSIMA	COL		2.9	60			X	1	19.9	662
MICROCYSTIS	COL			X		0.7	178			
MICROCYSTIS #1	COL		1.9	42						
MICROCYSTIS AERUGINOSA	COL	3	14.0	305	3	9.2	2399			X
MICROCYSTIS INCERTA	COL			X			X	2	19.2	639
NAVICULA #1	CEL					1.0	267			X
NAVICULA #2	CEL			X		0.3	89			X
NAVICULA HOLSATICA	CEL									X
NITZSCHIA	CEL			X						X
NITZSCHIA ACICULARIS	CEL			X						
NITZSCHIA HOLSATICA	CEL			X						
NITZSCHIA HOLSATICA ?	CEL						X			
NITZSCHIA PALEA	CEL			X						
NITZSCHIA PALEA ?	CEL						X			
OSCILLATORIA	FIL					1.0	267			
OSCILLATORIA ?	FIL	1	17.3	376						
OSCILLATORIA #1	FIL			X						
PANDORINA	COL									X

LAKE NAME: JACKSON LAKE
STORET NUMBER: 1309

CONTINUED

TAXA	FORM	07 01 73 S	%C	ALGAL UNITS PER ML	09 08 73 S	%C	ALGAL UNITS PER ML	11 13 73 S	%C	ALGAL UNITS PER ML
PEDIASTRUM BIRADIATUM	COL			X						
PEDIASTRUM DUPLEX V. RETICULATUM	COL		0.5	10					0.7	23
PEDIASTRUM TETRAS	COL									
PEDIASTRUM TETRAS V. TETRAODON	COL		0.3	7					2.0	68
PENNATE DIATOMS	CEL	2	16.6	361						
PERIDINIUM UMBONATUM	CEL					0.3	89			
PHACUS	CEL			X						
PHACUS ACUMINATUS	CEL		0.3	7						X
PHACUS CHLOROPLASTES	CEL									
PHACUS LONGICAUDA	CEL			X						
PHACUS PYRUM	CEL			X						
PHORMIDIUM MUCICOLA	FIL		3.3	71						
RAPHIDIOPSIS	FIL				1	68.3	17771			
RAPHIDIOPSIS ?	FIL		1.9	42					2.7	91
RAPHIDIOPSIS CURVATA ?	FIL									
SCENEDESMUS ARCUATUS F. SPINOSUS	COL					0.3	89			
SCENEDESMUS ARCUATUS V. PLATYDISCA	COL			X						
SCENEDESMUS ARMATUS	COL		0.6	14						
SCENEDESMUS BICAUDATUS	COL			X			X			
SCENEDESMUS DENTICULATUS	COL			X					1.4	46
SCENEDESMUS DIMORPHUS	COL		1.9	42					0.7	23
SCENEDESMUS INTERMEDIUS	COL			X						
SCENEDESMUS OPOLIENSIS	COL	5	3.9	85						
SCENEDESMUS PROTUBERANS	COL			X			X			
SCENEDESMUS QUADRICAUDA	COL		0.6	14		1.0	267	5	7.5	251
SCHROEDERIA	CEL						X			
SCHROEDERIA SETIGERA	CEL		3.5	77						X
STAURASTRUM #1	CEL			X						

LAKE NAME: JACKSON LAKE
STORET NUMBER: 1309

CONTINUED

TAXA	FORM	07 01 73 S	%C	ALGAL UNITS PER ML	09 08 73 S	%C	ALGAL UNITS PER ML	11 13 73 S	%C	ALGAL UNITS PER ML
STAURASTRUM #2	CEL			X						X
STEPHANODISCUS ?	CEL		0.6	14						
SURIRELLA	FIL			X						
SURIRELLA #1	CEL						X			X
SURIRELLA #2	CEL						X			
SYNEDRA	CEL			X						
SYNEDRA #1	CEL			X			X		0.7	23
SYNEDRA #2	CEL									X
SYNEDRA DELICATISSIMA	CEL		1.6	35						
SYNEDRA RADIANS	CEL			X						
SYNEDRA RUMPENS ?	CEL			X						
TETRAEDRON GRACILE	CEL			X						
TETRAEDRON MINIMUM	CEL		0.5	10						
TRACHELOMONAS #1	CEL		0.3	7						
TRACHELOMONAS #2	CEL			X						
TRACHELOMONAS PULCHELLA	CEL								0.7	23
TRACHELOMONAS URCEOLATA	CEL		0.3	7						
TREUBARIA	CEL						X			
TREUBARIA TRIAPPENDICULATA	CEL									X
TOTAL				2177			26037			3334

LAKE NAME: LAKE SIDNEY LANIER
STORET NUMBER: 1310

NYGAARD TROPHIC STATE INDICES

DATE	06 29 73	09 13 73	11 09 73
MYXOPHYCEAN	1.00 E	3.00 E	02/0 E
CHLOROPHYCEAN	3.00 E	2.00 E	05/0 E
EUGLENOPHYTE	0/04 ?	0.30 E	0/07 ?
DIATOM	0.60 E	0.50 E	0.50 E
COMPOUND	7.00 E	8.00 E	10/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 29 73	09 13 73	11 09 73
GENUS	00	03	02
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 29 73	09 13 73	11 09 73
AVERAGE DIVERSITY	H	3.02	1.92	3.17
NUMBER OF TAXA	S	20.00	34.00	21.00
NUMBER OF SAMPLES COMPOSITED	M	12.00	12.00	12.00
MAXIMUM DIVERSITY	MAXH	4.32	5.09	4.39
TOTAL DIVERSITY	D	1075.12	6618.24	1676.93
TOTAL NUMBER OF INDIVIDUALS/ML	N	356.00	3447.00	529.00
EVENESS COMPONENT	J	0.70	0.38	0.72
MEAN NUMBER OF INDIVIDUALS/TAXA	L	17.80	101.38	25.19
NUMBER/ML OF MOST ABUNDANT TAXON	K	132.00	2420.00	137.00

Reproduced from best available copy.

LAKE NAME: LAKE SIDNEY LANIER CONTINUED
STORET NUMBER: 1310

TAXA	FORM	06 29 73 S	06 29 73 %C	06 29 73 ALGAL UNITS PER ML	09 13 73 S	09 13 73 %C	09 13 73 ALGAL UNITS PER ML	11 09 73 S	11 09 73 %C	11 09 73 ALGAL UNITS PER ML
ACHNANTHES MICROCEPHALA	CEL		2.5	9		0.4	14			
ANABAENA	FIL			X						
ANKISTRODESMUS FALCATUS	CEL								3.2	17
APHANIZOMENON FLOS-AQUAE	FIL					0.4	14			
ASTERIONELLA FORMOSA	CEL		5.3	19		1.6	55	4	6.4	34
CERATIUM HIRUNDINELLA F. ?	CEL	5	2.5	9						
CERATIUM HIRUNDINELLA F. BRACHYCERAS	CEL									X
CHILOMONAS PARAMAECIUM	CEL						X			
CHLAMYDOMONAS GLOBOSA ?	CEL						X			
CHLOROPHYTAN COCCOID CELL	CEL							5	9.6	51
COSMARIUM	CEL		2.5	9			X			
CRYPTOMONAS	CEL	2	10.7	38	5	1.6	55			
CRYPTOMONAS EROSA	CEL								3.2	17
CYCLOTELLA	CEL					0.4	14	3	16.3	86
CYCLOTELLA STELLIGERA	CEL	4	10.7	38						
DACTYLOCOCCOPSIS IRREGULARIS	CEL				4	3.6	123			
DINOFLAGELLATE CYST	CEL					0.8	27			
EUGLENA	CEL					0.8	27			
FLAGELLATE #1	CEL					1.6	55			
FRAGILARIA CROTONENSIS	CEL	1	37.1	132						X
GLENODINIUM	CEL						X			
GYMNODINIUM	CEL		7.9	28			X			
LYNGBYA #1	FIL					2.4	82			
LYNGBYA LIMNETICA	FIL				1	70.2	2420		9.6	51
MALLOMONAS	CEL		2.5	9						X
MALLOMONAS CAUDATA	CEL					0.4	14			
MELOSIRA DISTANS	CEL	3	10.7	38						
MELOSIRA DISTANS ?	CEL					0.8	27			
MELOSIRA GRANULATA	CEL							2	12.9	68
MELOSIRA GRANULATA ?	CEL						X			

LAKE NAME: LAKE SIDNEY LANIER CONTINUED
STORET NUMBER: 1310

TAXA	FORM	06 29 73 S	06 29 73 %C	06 29 73 ALGAL UNITS PER ML	09 13 73 S	09 13 73 %C	09 13 73 ALGAL UNITS PER ML	11 09 73 S	11 09 73 %C	11 09 73 ALGAL UNITS PER ML
MELOSIRA ITALICA	CEL							1	25.9	137
MELOSIRA ITALICA ?	CEL			X						
MERISMOPEDIA TENUISSIMA	COL					0.8	27			
MICROCYSTIS INCERTA	CCL				2	8.3	287			
NAVICULA	CEL			X			X			
NAVICULA #1	CEL									X
NITZSCHIA #1	CEL									X
OSCILLATORIA	FIL								3.2	17
PANDORINA PROTUBERANS	COL		2.5	9						
PEDIASTRUM OBTUSUM	COL									X
PENNATE DIATOMS	CEL					0.4	14			
PERIDINIUM	CEL		2.5	9			X			
PERIDINIUM INCONSPICUUM	CEL									X
PERIDINIUM WISCONSINENSE	CEL		2.5	9			X			
PLANKTOSPHAERIA GELATINOSA	COL						X			
SCENEDESMUS ARMATUS	COL			X						
SCENEDESMUS BIJUGA	COL						X		3.2	17
SCENEDESMUS INTERMEDIUS	COL						X			
SCENEDESMUS INTERMEDIUS V. BICAUDATUS	COL			X						
SCENEDESMUS PROTUBERANS	COL								3.2	17
SCENEDESMUS QUADRICAUDA	COL					0.4	14			
STAURASTRUM	CEL						X			
SYNEDRA #1	CEL				3	4.0	137			
SYNEDRA #2	CEL						X		3.2	17
SYNEDRA RADIANS ?	CEL			X						
TABELLARIA FENESTRATA	CEL									X
TETRASTRUM HETERACANTHUM	COL									X
TRACHELOMONAS	CEL					1.2	41			
TRACHELOMONAS OBLONGA V. AUSTRALICA	CEL						X			
TREUBARIA SETIGERUM	CEL			X						
TOTAL				356			3447			529

LAKE NAME: NOTTLEY LAKE
STORET NUMBER: 1311

NYGAARD TROPHIC STATE INDICES

DATE	06 27 73	09 12 73	11 12 73
MYXOPHYCEAN	2.00 E	2.33 E	03/0 E
CHLOROPHYCEAN	2.00 E	1.33 E	04/0 E
EUGLENOPHYTE	0/04 ?	0/11 ?	0/07 ?
DIATOM	1.33 E	0.75 E	1.33 E
COMPOUND	8.00 E	4.67 E	11/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 27 73	09 12 73	11 12 73
GENUS	03	11	03
SPECIES	00	03	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 27 73	09 12 73	11 12 73
AVERAGE DIVERSITY	H	1.70	3.27	3.07
NUMBER OF TAXA	S	17.00	29.00	20.00
NUMBER OF SAMPLES COMPOSITED	M	3.00	3.00	3.00
MAXIMUM DIVERSITY	MAXH	4.09	4.86	4.32
TOTAL DIVERSITY	D	2607.80	16873.20	2836.68
TOTAL NUMBER OF INDIVIDUALS/ML	N	1534.00	5160.00	924.00
EVENESS COMPONENT	J	0.42	0.67	0.71
MEAN NUMBER OF INDIVIDUALS/TAXA	L	90.24	177.93	46.20
NUMBER/ML OF MOST ABUNDANT TAXON	K	1106.00	1037.00	177.00

LAKE NAME: NOTTLEY LAKE
STORET NUMBER: 1311

CONTINUED

TAXA	FORM	06 27 73 S	06 27 73 %C	06 27 73 ALGAL UNITS PER ML	09 12 73 S	09 12 73 %C	09 12 73 ALGAL UNITS PER ML	11 12 73 S	11 12 73 %C	11 12 73 ALGAL UNITS PER ML
ANABAENA	FIL	3	5.1	78						X
ANKISTRODESMUS FALCATUS	CEL					3.2	164			
ASTERIONELLA FORMOSA	CEL								6.4	59
ASTERIONELLA FORMOSA V. GRACILLIMA	CEL						X			
ATTHEYA	CEL		0.8	13						
CENTRIC DIATOM	CEL			X				3	19.2	177
CERATIUM HIRUNDINELLA	CEL						X			
CHLAMYDOMONAS	CEL						X			
CHROMULINA ?	CEL				2	20.1	1037			
CHROOCOCCUS	COL					1.6	82			
COSMARIUM #1	CEL					1.1	55			
COSMARIUM #2	CEL						X			
CRYPTOMONAS	CEL		0.8	13						
CRYPTOMONAS EROSA	CEL							4	8.5	79
CRYPTOMONAS OVATA	CEL					2.6	136			
CYANOPHYTAN ? COLONY	COL						X			
CYANOPHYTAN FILAMENT	FIL					1.1	55			X
CYCLOTELLA	CEL					1.1	55			
CYCLOTELLA STELLIGERA	CEL	2	5.9	91					6.4	59
DICTYOSPHAERIUM	COL									X
DICTYOSPHAERIUM PULCHELLUM	COL		1.7	26						X
DINOFLAGELLATE	CEL									
FLAGELLATE #1	CEL	5	3.4	52				5	10.6	98
FLAGELLATE #2	CEL		2.5	39						X
FLAGELLATE #9	CEL									
FLAGELLATES	CEL				5	8.5	437			
GYMNODINIUM	CEL						X			
KIRCHNERIELLA	CEL					1.1	55			
LYNGBYA	FIL						X		2.2	20
LYNGBYA LIMNETICA	FIL				3	19.6	1010			
MALLOMONAS	CEL			X		1.1	55			X

LAKE NAME: NOTTLEY LAKE
STORET NUMBER: 1311

CONTINUED

TAXA	FORM	06 27 73 S	06 27 73 %C	06 27 73 ALGAL UNITS PER ML	09 12 73 S	09 12 73 %C	09 12 73 ALGAL UNITS PER ML	11 12 73 S	11 12 73 %C	11 12 73 ALGAL UNITS PER ML
MELOSIRA	CEL									X
MELOSIRA DISTANS	CEL		2.5	39			X		4.2	39
MERISMOPEDIA TENUISSIMA	COL					5.8	300			
MOUGEOTIA	FIL								6.4	59
OOCYSTIS	CEL					1.1	55			X
OSCILLATORIA	FIL			X		1.6	82			
PEDIASTRUM TETRAS V. TETRAODON	COL									X
PENNATE DIATOM	CEL		0.8	13						
PERIDINIUM	CEL			X						
PERIDINIUM INCONSPICUUM	CEL					0.5	27			
RHIZOSOLENIA	CEL					0.5	27			
SCENEDESMUS ARMATUS	COL									X
SCENEDESMUS OPOLIENSIS	COL			X						
STAURASTRUM	CEL			X			X			
SYNEDRA	CEL						X			
SYNEDRA ? RADIANS	CEL	4	4.2	64				1	19.2	177
SYNEDRA RADIANS	CEL				4	9.5	491			
TABELLARIA FENESTRATA	CEL	1	72.1	1106	1	19.6	1010	2	17.0	157
TETRAEDRON CAUDATUM	CEL					0.5	27			
TOTAL				1534			5160			924

LAKE NAME: LAKE SEMINOLE
STORET NUMBER: 1312

NYGAARD TROPHIC STATE INDICES

DATE	06 20 73	08 31 73	11 03 73
MYXOPHYCEAN	10.0 E	3.00 E	7.00 E
CHLOROPHYCEAN	18.0 E	2.67 E	12.0 E
EUGLENOPHYTE	0.14 ?	0.12 ?	0/19 ?
DIATOM	0.50 E	0.37 E	0.30 ?
COMPOUND	36.0 E	7.33 E	22.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 20 73	08 31 73	11 03 73
GENUS	05	05	16
SPECIES	04	04	07

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 20 73	08 31 73	11 03 73
AVERAGE DIVERSITY	H	3.67	3.71	4.11
NUMBER OF TAXA	S	52.00	38.00	40.00
NUMBER OF SAMPLES COMPOSITED	M	5.00	5.00	5.00
MAXIMUM DIVERSITY	MAXH	5.70	5.25	5.32
TOTAL DIVERSITY	C	3134.18	6184.57	24257.22
TOTAL NUMBER OF INDIVIDUALS/ML	N	854.00	1667.00	5902.00
EVENESS COMPONENT	J	0.64	0.71	0.77
MEAN NUMBER OF INDIVIDUALS/TAXA	L	16.42	43.87	147.55
NUMBER/ML OF MOST ABUNDANT TAXON	K	202.00	444.00	1107.00

LAKE NAME: LAKE SEMINOLE
STORET NUMBER: 1312

CONTINUED

TAXA	FORM	06 20 73 S	06 20 73 %C	06 20 73 ALGAL UNITS PER ML	08 31 73 S	08 31 73 %C	08 31 73 ALGAL UNITS PER ML	11 03 73 S	11 03 73 %C	11 03 73 ALGAL UNITS PER ML
ACHNANTHES	CEL			X						
ACHNANTHES ?	CEL						X			
ACHNANTHES MICROCEPHALA	CEL									X
ANABAENA	FIL					1.4	23			
ANABAENA #1	FIL			X						X
ANABAENA SPIROIDES	FIL		1.3	11						
ANKISTRODESMUS	CEL		2.5	21						
ANKISTRODESMUS FALCATUS	CEL								1.1	65
APHANIZOMENON ?	FIL		1.3	11						
APHANOCAPSA	CEL	5	7.5	64						
ASTERIONELLA FORMOSA	CEL									X
BINUCLEARIA ?	FIL							1	18.8	1107
CHLAMYDOMONAS	CEL					2.1	35			
CHLAMYDOMONAS ?	CEL		2.5	21						
CHLOROPHYTAN COCCOID CELL	CEL							4	8.1	477
CHROOCOCCUS	COL			X	5	5.6	94			
CHROOCOCCUS LIMNETICUS	COL								5.5	326
COCCOID CELL #2	CEL							5	6.3	369
COCCONEIS	CEL			X						
COELASTRUM SPP.	COL			X						
COSMARIUM	CEL					0.7	12		0.4	22
CRUCIGENIA	COL					0.7	12			
CRYPTOMONAS	CEL		1.3	11		2.8	47		2.2	130
CYCLOTELLA	CEL								1.5	87
CYCLOTELLA STELLIGERA	CEL		3.7	32						
CYMBELLA	CEL									X
DACTYLOCOCCOPSIS	CEL			X	1	26.6	444			
DENTICULA	CEL			X						
DINOBRYON	CEL			X						
DINOFLAGELLATE CYST	CEL								0.4	22
EUDORINA ?	COL			X						
EUGLENA	CEL					0.7	12			

LAKE NAME: LAKE SEMINOLE CONTINUED
STORET NUMBER: 1212

TAXA	FORM	06 20 73 S	06 20 73 %C	06 20 73 ALGAL UNITS PER ML	08 31 73 S	08 31 73 %C	08 31 73 ALGAL UNITS PER ML	11 03 73 S	11 03 73 %C	11 03 73 ALGAL UNITS PER ML
EUGLENA #1	CEL			X						
EUGLENA #2	CEL			X						
FLAGELLATE #1	CEL		1.3	11		2.8	47		3.3	195
FLAGELLATE #2	CEL									X
FRAGILARIA	CEL		2.5	21						
FRAGILARIA CROTONENSIS	CEL									X
GLOEOCYSTIS	CEL		1.3	11						
GOLENKINIA	CEL			X		0.7	12			
GOLENKINIA RADIATA	CEL								1.1	65
GOMPHONEMA	CEL			X						
KIRCHNERIELLA	CEL		1.3	11						
KIRCHNERIELLA CONTORTA	CEL								2.6	152
KIRCHNERIELLA SUBSOLITARIA ?	CEL			X						
LAGERHEIMIA CILIATA V. MINOR	CEL			X						
LEPOCINCLIS ?	CEL			X						
LYNGBYA SUBTILIS	FIL					2.2	37			
MALLOMONAS	CEL		1.3	11		0.7	12			
MELOSIRA AMBIGUA	CEL			X						
MELOSIRA DISTANS	CEL	2	17.4	149		2.8	47			
MELOSIRA DISTANS ?	CEL							2	7.0	412
MELOSIRA GRANULATA	CEL	1	23.7	202			X		0.7	43
MELOSIRA ITALICA ?	CEL				4	5.6	94			
MERISMOPEDIA	COL					2.2	37			
MERISMOPEDIA TENUISSIMA	COL	4	6.2	53			X		5.9	347
MICROCYSTIS	COL				3	8.4	140			
MICROCYSTIS INCERTA	COL			X			X		9.2	542
NAVICULA	CEL					2.8	47			X
NAVICULA CAPITATA V. HUNGARICA	CEL									X
NAVICULA GASTRUM	CEL						X			
NITZSCHIA ACICULARIS	CEL						X			

LAKE NAME: LAKE SEMINOLE
STORET NUMBER: 1312

CONTINUED

TAXA	FORM	06 20 73 S	%C	ALGAL UNITS PER ML	08 31 73 S	%C	ALGAL UNITS PER ML	11 03 73 S	%C	ALGAL UNITS PER ML
NITZSCHIA HOLSATICA	CEL						X			X
COCYSTIS	CEL			X						
OSCILLATORIA #1	FIL			X					1.8	109
OSCILLATORIA #2	FIL								4.0	239
OSCILLATORIA GEMINATA	FIL		2.5	21						
PANDORINA MORUM	COL			X						
PEDIASTRUM BIRADIATUM	COL			X			X			
PEDIASTRUM BORYANUM	COL			X						
PEDIASTRUM DUPLEX V. CLATHRATUM	COL		1.3	11						
PEDIASTRUM SIMPLEX ?	COL						X			
PEDIASTRUM SIMPLEX V. DUODENARIUM	COL						X			
PEDIASTRUM TETRAS V. TETRAODON	COL			X						
PENNATE DIATOM #1	CEL			X					3.7	217
PENNATE DIATOM #2	CEL		1.3	11						
PERIDINIUM INCONSPICUUM	CEL					0.7	12			
PHACUS	CEL					0.7	12			
RAPHIDIOPSIS CURVATA	FIL				2	13.2	304	3	5.9	347
SCENEDESMUS	COL			X						
SCENEDESMUS ABUNDANS	COL									X
SCENEDESMUS ACUMINATUS	COL									X
SCENEDESMUS ARCUATUS	COL					1.4	23			
SCENEDESMUS BICAUDATUS	COL		7.5	64		0.7	12		0.7	43
SCENEDESMUS BIJUGA	COL								0.4	22
SCENEDESMUS DENTICULATUS	COL		1.3	11						
SCENEDESMUS INTERMEDIUS	COL								0.7	43
SCENEDESMUS PROTUBERANS	COL								1.1	65
SCENEDESMUS QUADRICAUDA	COL	3	10.0	85		4.9	82		5.2	304
STAURASTRUM	CEL			X		0.7	12			
STAURASTRUM LEPTOCLADUM ?	CEL					2.1	35			

LAKE NAME: LAKE SEMINOLE
STORET NUMBER: 1312

CONTINUED

TAXA	FORM	06 20 73 S	06 20 73 %C	06 20 73 ALGAL UNITS PER ML	08 31 73 S	08 31 73 %C	08 31 73 ALGAL UNITS PER ML	11 03 73 S	11 03 73 %C	11 03 73 ALGAL UNITS PER ML
SURIRELLA	CEL									X
SYNEDRA	CEL			X					1.5	87
SYNEDRA RUMPENS	CEL						X			
SYNEDRA ULNA	CEL					1.4	23			
SYNEDRA VAUCHERIAE V. CAPITELLATA	CEL						X			
TETRAEDRON MINIMUM	CEL			X						
TETRASTRUM HETERACANTHUM	COL								1.1	65
TRACHELOMONAS URCEOLATA	CEL			X						
TREUBARIA	CEL		1.3	11						
TREUBARIA SETIGERUM	CEL									X
TOTAL				854			1667			5902

LAKE NAME: LAKE SINCLAIR
STORET NUMBER: 1313

NYGAARD TROPHIC STATE INDICES

DATE	07 01 73	09 08 73	11 13 73
MYXOPHYCEAN	1.80 E	3.50 E	3.00 E
CHLOROPHYCEAN	4.20 E	4.50 E	15.0 E
EUGLENOPHYTE	0.13 ?	0.19 ?	0.11 ?
DIATOM	1.00 E	0.33 E	0.50 E
COMPOUND	8.20 E	10.0 E	23.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	07 01 73	09 08 73	11 13 73
GENUS	16	07	08
SPECIES	07	03	04

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		07 01 73	09 08 73	11 13 73
AVERAGE DIVERSITY	H	3.86	2.62	3.88
NUMBER OF TAXA	S	63.00	27.00	37.00
NUMBER OF SAMPLES COMPOSITED	M	6.00	6.00	6.00
MAXIMUM DIVERSITY	MAXH	5.98	4.75	5.21
TOTAL DIVERSITY	D	13127.86	9919.32	8520.48
TOTAL NUMBER OF INDIVIDUALS/ML	N	3401.00	3786.00	2196.00
EVENESS COMPONENT	J	0.65	0.55	0.74
MEAN NUMBER OF INDIVIDUALS/TAXA	L	53.98	140.22	59.35
NUMBER/ML OF MOST ABUNDANT TAXON	K	618.00	1502.00	468.00

LAKE NAME: LAKE SINCLAIR
STORET NUMBER: 1313

CONTINUED

TAXA	FORM	07 01 73 S	07 01 73 %C	07 01 73 ALGAL UNITS PER ML	09 08 73 S	09 08 73 %C	09 08 73 ALGAL UNITS PER ML	11 13 73 S	11 13 73 %C	11 13 73 ALGAL UNITS PER ML
ACHNANTHES LANCEOLATA V. DUBIA	CEL			X						
ACHNANTHES MICROCEPHALA	CEL			X		0.4	15			
ANABAENA	FIL	4	6.7	227						
ANABAENA PLANCTONICA	FIL			X						
ANKISTRODESMUS FALCATUS	CEL								0.8	18
APHANIZOMENON	FIL					0.4	15			
CHROOCOCCUS	COL									X
CHROOCOCCUS	COL		0.6	21			X		14.8	324
CLOSTERIUM	CEL			X						
COELASTRUM	COL								2.5	54
COELASTRUM SPHAERICUM	COL			X						
COSMARIUM	CEL		0.6	21			X			
CRUCIGENIA APICULATA	COL		1.8	62						
CRUCIGENIA QUADRATA	COL									X
CRYPTOMONAS	CEL		1.8	62						
CRYPTOMONAS EROSA ?	CEL								4.9	108
CYCLOTELLA	CEL								5.7	126
CYCLOTELLA GLOMERATA ?	CEL									X
CYCLOTELLA MENEGHINIANA	CEL			X						
CYCLOTELLA STELLIGERA	CEL			X						
CYMBELLA	CEL			X						
CYMBELLA VENTRICOSA	CEL									X
DACTYLOCOCCOPSIS	CEL		3.6	124	4	14.8	560			
DICTYOSPHAERIUM PULCHELLUM	COL			X						
DINOBRYON DIVERGENS	CEL								3.3	72
DINOFLAGELLATES	CEL	5	5.4	185						
EUASTRUM	CEL			X						
EUDORINA ELEGANS	COL			X						
EUGLENA	CEL			X			X			
FLAGELLATE #1	CEL								0.8	18
FLAGELLATES	CEL	3	10.9	371						

LAKE NAME: LAKE SINCLAIR
STORET NUMBER: 1313

CONTINUED

TAXA	FORM	07 01 73 S	07 01 73 %C	07 01 73 ALGAL UNITS PER ML	09 08 73 S	09 08 73 %C	09 08 73 ALGAL UNITS PER ML	11 13 73 S	11 13 73 %C	11 13 73 ALGAL UNITS PER ML
FRANCEIA	CEL			X						
GLENODINIUM	CEL			X						X
GOLENKINIA	CEL								0.8	18
GOLENKINIA #2	CEL									X
KIRCHNERIELLA	CEL					0.8	29		3.3	72
LAGERHEIMIA	CEL			X						
LYNGBYA	FIL		3.0	103						
LYNGBYA LIMNETICA	FIL				2	24.5	928			
MALLOMONAS	CEL								2.5	54
MELOSIRA DISTANS	CEL		1.2	41		0.8	29			
MELOSIRA GRANULATA	CEL			X				5	0.8	18
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL			X						
MERISMOPEDIA	COL					0.4	15			
MERISMOPEDIA TENUISSIMA	COL			X						
MESOSTIGMA VIRIDIS	CEL		0.6	21						
MICROCYSTIS	COL					2.0	74		5.7	126
MICROCYSTIS INCERTA	COL		1.2	41						
MOUGEOTIA	FIL			X	3	5.8	221	1	6.6	144
NAVICULA	CEL			X						
NAVICULA CAPITATA	CEL									X
NITZSCHIA	CEL		7.3	247						X
NITZSCHIA HOLSATICA	CEL					0.8	29			X
NITZSCHIA HUNGARICA	CEL								0.8	18
COCYSTIS	CEL			X						
OSCILLATORIA	FIL		4.2	144						
PANDORINA MORUM	COL		1.8	62						
PEDIASTRUM BIRADIATUM	COL								0.8	18
PEDIASTRUM BIRADIATUM V. LONGECORNUTUM	COL			X						
PEDIASTRUM DUPLEX V. RETICULATUM	COL			X						

LAKE NAME: LAKE SINCLAIR
STORET NUMBER: 1313

CONTINUED

TAXA	FORM	07 01 73 S	07 01 73 %C	07 01 73 ALGAL UNITS PER ML	09 08 73 S	09 08 73 %C	09 08 73 ALGAL UNITS PER ML	11 13 73 S	11 13 73 %C	11 13 73 ALGAL UNITS PER ML
PERIDINIUM	CEL			X						
PERICINIUM CUNNINGTONII	CEL			X						
PERIDINIUM SPP.	CEL					2.3	88			
PHACUS	CEL									X
PHACUS #1	CEL					0.4	15			
PHACUS HELIKOIDES	CEL		0.6	21						
PHACUS LONGICAUDA	CEL						X			
RAPHIDIOPSIS	FIL				1	39.7	1502	2	21.3	468
RAPHIDIOPSIS CURVATA	FIL	2	16.3	556						
RHIZOSOLENIA	CEL			X						
SCENEDESMUS #1	COL		0.6	21						
SCENEDESMUS ABUNDANS	COL			X			X			
SCENEDESMUS ACUMINATUS	COL					0.4	15			
SCENEDESMUS BICAUDATUS	COL			X			X		1.6	36
SCENEDESMUS BIJUGA	COL			X						
SCENEDESMUS BIJUGA V. ALTERNANS	COL									X
SCENEDESMUS DENTICULATUS	COL			X						
SCENEDESMUS DIMORPHUS	COL		0.6	21						
SCENEDESMUS INTERMEDIUS V. BICAUDATUS	COL			X						
SCENEDESMUS QUADRICAUDA	COL		2.4	82		1.2	44	3	9.0	198
SCHROEDERIA	CEL								1.6	36
SCHROEDERIA SETIGERA	CEL			X						
STAURASTRUM	CEL			X		0.4	15		0.8	18
STAURASTRUM #1	CEL		1.2	41						
STEPHANODISCUS	CEL		4.2	144						
SYNEDRA	CEL			X					4.9	108
SYNEDRA #1	CEL	1	18.2	618						
SYNEDRA ULNA ?	CEL				5	3.5	133			
TETRAEDRON #1	CEL					0.4	15			
TETRAEDRON MINIMUM	CEL					0.8	29	4	4.1	90

LAKE NAME: LAKE SINCLAIR
STORET NUMBER: 1313

CONTINUED

TAXA	FORM	07 01 73 S	%C	ALGAL UNITS PER ML	09 08 73 S	%C	ALGAL UNITS PER ML	11 13 73 S	%C	ALGAL UNITS PER ML
TETRAEDRON MINIMUM V. SCROBICULATUM	CEL		4.9	165					0.8	18
TETRAEDRON REGULARE V. INCUS	CEL									X
TETRAEDRON TRIGONUM V. GRACILE	CEL			X						
TETRASTRUM HETERACANTHUM	COL						X			X
TETRASTRUM STAUROGENIAEFORME	COL			X						
TRACHELOMONAS	CEL			X					1.6	36
TRACHELOMONAS GIRARDIANA	CEL			X						
TREUBARIA	CEL			X		0.4	15			
TOTAL				3401			3786			2196

LAKE NAME: LAKE EUFAULA
STORET NUMBER: 1314

NYGAARD TROPHIC STATE INDICES

DATE	06 19 73	08 30 73	11 03 73
MYXOPHYCEAN	10.0 E	2.25 E	5.00 E
CHLOROPHYCEAN	9.00 E	3.25 E	6.00 E
EUGLENOPHYTE	0/19 ?	0.14 ?	0.05 ?
DIATOM	1.00 E	1.00 E	0.37 E
COMPOUND	23.0 E	7.50 E	13.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 19 73	08 30 73	11 03 73
GENUS	15	17	21
SPECIES	06	04	04

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 19 73	08 30 73	11 03 73
AVERAGE DIVERSITY	H	3.14	2.53	3.93
NUMBER OF TAXA	S	33.00	42.00	41.00
NUMBER OF SAMPLES COMPOSITED	M	4.00	4.00	4.00
MAXIMUM DIVERSITY	MAXH	5.04	5.39	5.36
TOTAL DIVERSITY	D	7645.90	63103.26	23544.63
TOTAL NUMBER OF INDIVIDUALS/ML	N	2435.00	24942.00	5551.00
EVENESS COMPONENT	J	0.62	0.47	0.73
MEAN NUMBER OF INDIVIDUALS/TAXA	L	73.79	593.86	146.12
NUMBER/ML OF MOST ABUNDANT TAXON	K	787.00	12010.00	1073.00

LAKE NAME: LAKE EUFAULA
STORET NUMBER: 1314

CONTINUED

TAXA	FORM	06 19 73 S	06 19 73 %C	06 19 73 ALGAL UNITS PER ML	08 30 73 S	08 30 73 %C	08 30 73 ALGAL UNITS PER ML	11 03 73 S	11 03 73 %C	11 03 73 ALGAL UNITS PER ML
ACTINASTRUM GRACILIMUM	CEL									X
AMPHORA	CEL					0.2	54			
ANABAENA	FIL		4.4	107						
ANABAENA #2	FIL			X						
ANABAENOPSIS	FIL				1	9.8	2446			
ANKISTRODESMUS	CEL								3.5	210
APHANIZOMENON ?	FIL			X						
APHANOTHECE	CEL		3.0	72						
ASTERIONELLA FORMOSA	CEL		1.5	36						
CENTRIC DIATOM	CEL					1.5	380			
CHLOMONAS ?	CEL						X			
CHLAMYDOMONAS	CEL		1.5	36						
CHLAMYDOMONAS ?	CEL								1.6	93
CHROOCOCCUS	COL						X	5	4.7	280
CHROOCOCCUS #1	COL									X
CHROOCOCCUS LIMNETICUS ?	COL									X
COELOSPHAERIUM	COL								0.4	23
COSMARIUM	CEL			X			X			X
CRUCIGENIA APICULATA	COL						X			
CRYPTOMONAS	CEL			X					3.9	233
CYANOPHYTAN COLONY	COL					0.7	163			
CYANOPHYTAN FILAMENT	FIL					0.2	54			
CYANOPHYTAN PALMELLOID COLONY	COL			X						
CYCLOTELLA MENEGHINIANA	CEL			X			X			
CYCLOTELLA STELLIGERA	CEL								3.5	210
CYMBELLA	CEL			X					0.4	23
DACTYLOCOCCOPSIS	CEL		1.5	36	3	48.2	12010	4	10.1	606
EUASTRUM	CEL								0.4	23
EUASTRUM #1	CEL					0.2	54			
EUASTRUM DENTICULATUM	CEL						X			
EUGLENA	CEL						X			X
FLAGELLATE #1	CEL								3.1	197

LAKE NAME: LAKE EUFAULA
STORET NUMBER: 1314

CONTINUED

TAXA	FORM	06 19 73 S	06 19 73 %C	06 19 73 ALGAL UNITS PER ML	08 30 73 S	08 30 73 %C	08 30 73 ALGAL UNITS PER ML	11 03 73 S	11 03 73 %C	11 03 73 ALGAL UNITS PER ML
FLAGELLATES	CEL					1.1	272			
FRANCEIA CROESCHERI	CEL									X
GLENODINIUM	CEL						X			
GOLENKINIA	CEL			X			X			
KIRCHNERIELLA SUBSOLITARIA	CEL								1.6	93
LYNGBYA	FIL		1.5	36						
LYNGBYA LIMNETICA	FIL					2.4	598			
LYNGBYA SUBTILIS	FIL									X
MALLOMONAS	CEL								0.8	47
MELOSIRA	CEL						X			
MELOSIRA DISTANS	CEL			X	5	2.2	543	3	8.9	536
MELOSIRA GRANULATA	CEL		4.4	107				1	17.9	1073
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL				4	4.8	1196			
MELOSIRA VARIANS	CEL	4	5.9	143						
MERISMOPEDIA	COL	3	8.8	215					3.1	187
MERISMOPEDIA TENUISSIMA	COL					2.4	598			
MICROCYSTIS	COL	2	22.1	537					4.3	257
NAVICULA	CEL						X			
NITZSCHIA #1	CEL					0.2	54			
NITZSCHIA HOLSATICA	CEL		3.0	72					1.2	70
OOCYSTIS	CEL						X			
OSCILLATORIA	FIL	1	32.3	787		0.2	54		2.3	140
OSCILLATORIA GEMINATA	FIL									X
PANDORINA	COL	5	4.4	107						
PEDIASTRUM BIRADIATUM	COL								0.4	23
PEDIASTRUM DUPLEX V. ?	COL			X						
PEDIASTRUM DUPLEX V. GRACILIMUM	COL						X			
PEDIASTRUM TETRAS V. TETRAODON	COL						X		0.4	23

LAKE NAME: LAKE EUFAULA
STORET NUMBER: 1314

CONTINUED

TAXA	FORM	06 19 73 S	06 19 73 %C	06 19 73 ALGAL UNITS PER ML	08 30 73 S	08 30 73 %C	08 30 73 ALGAL UNITS PER ML	11 03 73 S	11 03 73 %C	11 03 73 ALGAL UNITS PER ML
PENNATE DIATOM #1	CEL								0.8	47
PENNATE DIATOM #2	CEL								1.6	93
PENNATE DIATOM #3	CEL								3.9	233
PENNATE DIATOM #4	CEL								0.4	23
PENNATE DIATOMS	CEL					0.4	109			
PERIDINIUM	CEL			X						X
PERIDINIUM ?	CEL									
PHACUS	CEL					0.2	54			
PHACUS CURVICAUDA ?	CEL						X			
RAPHIDIOPSIS CURVATA	FIL				2	21.6	5380			
SCENEDESMUS #1	COL			X		0.2	54			
SCENEDESMUS #2	COL					0.9	217			
SCENEDESMUS ABUNDANS	COL					0.4	109			X
SCENEDESMUS BICAUDATUS	COL		1.5	36					2.7	163
SCENEDESMUS BRASILIENSIS	COL					0.2	54			
SCENEDESMUS DENTICULATUS	COL			X			X			
SCENEDESMUS DENTICULATUS V. LINEARIS	COL			X						X
SCENEDESMUS DIMORPHUS	COL								0.4	23
SCENEDESMUS INTERMEDIUS	COL			X		0.4	109			
SCENEDESMUS PROTUBERANS	COL		3.0	72		1.3	326	2	17.5	1049
SCENEDESMUS QUADRICAUDA	CEL						X			
STAURASTRUM ?	CEL			X						X
SYNEDRA	CEL					0.2	54			
SYNEDRA RADIANS	CEL									X
TABELLARIA FENESTRATA										
TETRAEDRON TRIGONUM V. GRACILE	CEL								0.4	23
TREUBARIA	CEL		1.5	36						
TREUBARIA TRIAPPENDICULATA	CEL						X			
ULOTHRIX	FIL			X						
TOTAL				2435			24942			5991

LAKE NAME: BLUE-RIDGE LAKE
STORET NUMBER: 1316

NYGAARD TROPHIC STATE INDICES

DATE	06 27 73	09 15 73	11 12 73
MYXOPHYCEAN	4.00 E	01/0 E	02/0 E
CHLOROPHYCEAN	1.00 E	0/0 O	01/0 E
EUGLENOPHYTE	0.20 ?	0/01 ?	0/03 ?
DIATOM	0.50 E	1.00 E	1.00 E
COMPOUND	7.00 E	02/0 E	06/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 27 73	09 15 73	11 12 73
GENUS	00	00	00
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 27 73	09 15 73	11 12 73
AVERAGE DIVERSITY	H	1.83	0.54	2.24
NUMBER OF TAXA	S	14.00	6.00	15.00
NUMBER OF SAMPLES COMPOSITED	M	3.00	3.00	3.00
MAXIMUM DIVERSITY	MAXH	3.81	2.58	3.91
TOTAL DIVERSITY	D	1376.16	1043.28	324.80
TOTAL NUMBER OF INDIVIDUALS/ML	N	752.00	1932.00	145.00
EVENESS COMPONENT	J	0.48	0.21	0.57
MEAN NUMBER OF INDIVIDUALS/TAXA	L	53.71	322.00	9.67
NUMBER/ML OF MOST ABUNDANT TAXON	K	376.00	1769.00	48.00

LAKE NAME: BLUE-RIDGE LAKE
STORET NUMBER: 1316

CONTINUED

TAXA	FORM	06 27 73 S	06 27 73 %C	06 27 73 ALGAL UNITS PER ML	09 15 73 S	09 15 73 %C	09 15 73 ALGAL UNITS PER ML	11 12 73 S	11 12 73 %C	11 12 73 ALGAL UNITS PER ML
ANABAENA	FIL		1.2	9				5	6.9	10
ANABAENA #2	FIL			X						
ASTERIONELLA FORMOSA	CEL	1	50.0	376						
CENTRIC DIATOM #1	CEL							2	33.1	48
COSMARIUM	CEL	3	8.5	64						
CYANOPHYTAN COCCOID CELL	CEL			X						
CYANOPHYTAN FILAMENT	FIL				4	1.4	27			
CYCLOTELLA STELLIGERA	CEL						X	1	33.1	48
DINOBRYON SERTULARIA	CEL									X
DINOBRYON SERTULARIA V. PROTUBERANS	CEL									X
DINOFLAGELLATE	CEL									X
DINOFLAGELLATE CYST	CEL			X						
EUGLENA	CEL			X						
FLAGELLATE #1	CEL	5	4.9	37	3	2.8	54		5.9	10
FLAGELLATE #2	CEL			X			X			
FLAGELLATES	CEL				2	4.2	82			
GYMNODINIUM	CEL									X
GYROSIGMA	CEL									X
MALLOMONAS	CEL									X
MELOSIRA	CEL							4	6.9	10
MELOSIRA DISTANS ?	CEL			X						
MICROCYSTIS INCERTA	COL							3	13.1	19
OOCYSTIS	CEL									X
OSCILLATORIA	FIL			X						
PERIDINIUM	CEL	4	4.9	37						
SCENEDESMUS DIMORPHUS	COL			X						
SYNEDRA	CEL									X
TABELLARIA FENESTRATA	CEL	2	30.5	229	1	91.6	1769			X
TOTAL				752			1932			145

LAKE NAME: BARTLETT'S FERRY RES.
STORET NUMBER: 1317

NYGAARD TROPHIC STATE INDICES

DATE	06 11 73	08 29 73	10 31 73
MYXOPHYCEAN	03/0 E	10.0 E	8.00 E
CHLOROPHYCEAN	04/0 E	16.0 E	13.0 E
EUGLENOPHYTE	0.14 ?	0.15 ?	0.05 ?
DIATOM	0.67 E	0.43 E	0.67 E
COMPOUND	12/0 E	33.0 E	26.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 11 73	08 29 73	10 31 73
GENUS	10	13	06
SPECIES	05	04	04

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 11 73	08 29 73	10 31 73
AVERAGE DIVERSITY	H	3.16	2.49	3.71
NUMBER OF TAXA	S	19.00	44.00	39.00
NUMBER OF SAMPLES COMPOSITED	M	5.00	4.00	4.00
MAXIMUM DIVERSITY	MAXH	4.25	5.46	5.29
TOTAL DIVERSITY	D	2363.68	25131.57	7535.01
TOTAL NUMBER OF INDIVIDUALS/ML	N	748.00	10093.00	2031.00
EVENESS COMPONENT	J	0.74	0.46	0.70
MEAN NUMBER OF INDIVIDUALS/TAXA	L	39.37	229.39	52.08
NUMBER/ML OF MOST ABUNDANT TAXON	K	168.00	6110.00	360.00

LAKE NAME: BARTLETT'S FERRY RES. CONTINUED
STORET NUMBER: 1317

TAXA	FORM	06 '1 73 S	%C	ALGAL UNITS PER ML	08 29 73 S	%C	ALGAL UNITS PER ML	10 31 73 S	%C	ALGAL UNITS PER ML
ANABAENA	FIL						X			
ANABAENA SPIROIDES	FIL									X
ANABAENOPSIS	FIL				2	7.0	710			
ANKISTRODESMUS	COL								1.0	21
APHANIZOMENON	FIL						X			
CHILOMONAS PARAMAECIUM	COL									X
CHROOCOCCUS	COL					0.9	93	4	11.5	233
CHROOCOCCUS DISPERSUS	COL									X
COELASTRUM	COL					0.3	31			
COELASTRUM MICROPORUM	COL									X
COSMARIUM	COL					0.6	62			X
CRUCIGENIA #1	COL					0.6	62			
CRUCIGENIA CRUCIFERA	COL						X			
CRUCIGENIA QUADRATA	COL						X			
CRUCIGENIA QUADRATA ?	COL								1.0	21
CRYPTOMONAS	COL					0.6	62		3.1	63
CRYPTOMONAS OVATA	COL	4	10.2	76						
CRYPTOMONAS OVATA ?	COL									X
CYANOPHYTAN COCCOID CELLED COLONY	COL				5	6.7	679			
CYCLOTELLA	COL	1	22.5	168						
CYCLOTELLA STELLIGERA	COL			X			X			
DACTYLOCOCCOPSIS ?	COL							5	10.4	212
EUGLENA	COL						X			X
FLAGELLATE #1	COL								4.2	85
FRAGILARIA	COL						X			
FRANCEIA	COL						X			X
GOMPHONEMA	COL		4.1	31						
GONIUM ?	COL									X
GYMNODINIUM	COL					0.3	31			X
GYROSIGMA	COL			X						
KIRCHNERIELLA	COL					1.2	123			
KIRCHNERIELLA SUBSOLITARIA	COL								7.3	148

LAKE NAME: BARTLETT'S FERRY RES. CONTINUED
STORET NUMBER: 1317

TAXA	FORM	06 11 73 S	06 11 73 %C	06 11 73 ALGAL UNITS PER ML	08 29 73 S	08 29 73 %C	08 29 73 ALGAL UNITS PER ML	10 31 73 S	10 31 73 %C	10 31 73 ALGAL UNITS PER ML
LYNGBYA	FIL					0.6	62			
LYNGBYA SUBTILIS	FIL								4.2	85
MELOSIRA DISTANS	CEL					0.6	62	1	17.7	360
MELOSIRA GRANULATA	CEL	3	12.3	92		1.2	123		4.2	85
MELOSIRA ISLANDICA ?	CEL									X
MELOSIRA ITALICA	CEL			X						
MELOSIRA VARIANS	CEL									X
MERISMOPEDIA	COL				3	4.9	494	2	12.5	254
MERISMOPEDIA TENUISSIMA	COL		8.2	61						
MICROCYSTIS	COL					1.5	154			X
NAVICULA	CEL		4.1	31						
NITZSCHIA	CEL						X			
NITZSCHIA #1	CEL								1.0	21
NITZSCHIA #2	CEL								1.0	21
NITZSCHIA HOLSATICA	CEL						X			
NITZSCHIA PALEA	CEL	5	8.2	61						
OSCILLATORIA	FIL	2	20.3	152	4	3.7	370			
OSCILLATORIA ?	FIL									X
PEDIASTRUM BIRADIATUM	COL						X			X
PEDIASTRUM DUPLEX	COL		2.0	15			X			
PENNATE DIATOM #1	CEL					0.3	31			X
PENNATE DIATOM #2	CEL					2.1	216		2.1	42
PERIDINIUM	CEL						X			
PHACUS #1	CEL						X			
PHACUS TORTUS	CEL						X			
QUADRIGULA	COL									X
RAPHIDIOPSIS	FIL			X	1	60.5	6110			
SCENEDESMUS	COL					0.9	93			
SCENEDESMUS ABUNDANS	COL						X		2.1	42
SCENEDESMUS ACUMINATUS	COL						X			
SCENEDESMUS BICAUDATUS	COL			X		0.9	93		5.2	106
SCENEDESMUS DENTICULATUS	COL					1.5	154			

LAKE NAME: BARTLETT'S FERRY RES. CONTINUED
STORET NUMBER: 1317

TAXA	FORM	06 11 73 S	06 11 73 %C	06 11 73 ALGAL UNITS PER ML	08 29 73 S	08 29 73 %C	08 29 73 ALGAL UNITS PER ML	10 31 73 S	10 31 73 %C	10 31 73 ALGAL UNITS PER ML
SCENEDESMUS DIMORPHUS	COL						X		1.0	21
SCENEDESMUS INTERMEDIUS	COL								1.0	21
SCENEDESMUS QUADRICAUDA	COL			X		1.5	154	3	9.4	190
SCHROEDERIA	CEL		2.0	15						
SYNEDRA	CEL									X
SYNEDRA #1	CEL					0.9	93			
SYNEDRA RUMPENS	CEL					0.3	31			
SYNEDRA ULNA	CEL		2.0	15						
TABELLARIA FENESTRATA	CEL			X						
TABELLARIA FLOCCULOSA	CEL									X
TRACHELOMONAS	CEL		4.1	31			X			
TREUBARIA	CEL						X			
TREUBARIA TRIAPPENDICULATA	CEL									X
TOTAL				748			10093			2031

LAKE NAME: LAKE BURTON
STORET NUMBER: 1318

NYGAARD TROPHIC STATE INDICES

DATE	06 28 73	09 18 73	11 10 73
MYXOPHYCEAN	01/0 E	03/0 E	2.00 E
CHLOROPHYCEAN	0/0 O	01/0 E	1.00 E
EUGLENOPHYTE	0/01 ?	0/04 ?	0/03 ?
DIATOM	0.20 ?	1.00 E	1.00 E
COMPOUND	02/0 E	06/0 E	6.00 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 28 73	09 18 73	11 10 73
GENUS	00	01	03
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 28 73	09 18 73	11 10 73
AVERAGE DIVERSITY	H	2.47	3.03	2.55
NUMBER OF TAXA	S	13.00	14.00	17.00
NUMBER OF SAMPLES COMPOSITED	M	3.00	3.00	3.00
MAXIMUM DIVERSITY	MAXH	3.70	3.81	4.09
TOTAL DIVERSITY	D	639.73	1863.45	2111.40
TOTAL NUMBER OF INDIVIDUALS/ML	N	259.00	615.00	828.00
EVENESS COMPONENT	J	0.67	0.80	0.62
MEAN NUMBER OF INDIVIDUALS/TAXA	L	19.92	43.93	48.71
NUMBER/ML OF MOST ABUNDANT TAXON	K	103.00	139.00	398.00

LAKE NAME: LAKE BURTON
STORET NUMBER: 1318

CONTINUED

TAXA	FORM	06 28 73 S	06 28 73 %C	06 28 73 ALGAL UNITS PER ML	09 18 73 S	09 18 73 %C	09 18 73 ALGAL UNITS PER ML	11 10 73 S	11 10 73 %C	11 10 73 ALGAL UNITS PER ML
ANKISTRODESMUS	CEL							5	8.3	69
APHANOCAPSA ?	CEL					2.4	15			
ASTERIONELLA FORMOSA	CEL	2	2.7	7				2	14.6	121
BINUCLEARIA	FIL						X			
CENTRIC DIATOM	CEL									X
CHLOROPHYTAN COCCOID CELL	CEL					2.4	15		2.1	17
CHRYSOPHYTAN COCCOID CELL	CEL			X					2.1	17
CRYPTOMONAS	CEL						X			
CYCLOTELLA STELLIGERA	CEL				3	15.0	92		2.1	17
CYMBELLA	CEL			X						
DINOBRYON SERTULARIA	CEL	5	5.8	15		5.0	31			X
FLAGELLATE #1	CEL	3	39.8	103					2.1	17
GLENODINIUM	CEL								2.1	17
GLOEOCYSTIS	COL				1	22.6	139			
KIRCHNERIELLA	CEL				2	20.0	123			
LYNGBYA SUBTILIS	FIL					2.4	15	1	48.1	398
MALLOMONAS	CEL	4	11.6	30					2.1	17
MELOSIRA DISTANS	CEL					5.0	31			
MELOSIRA DISTANS ?	CEL		5.8	15				3	10.4	86
MERISMOPEDIA	COL				4	15.0	92			
MICROCYSTIS INCERTA	COL							4	4.2	35
NITZSCHIA	CEL			X						
OSCILLATORIA	FIL		11.6	30						
PENNATE DIATOM	CEL		2.7	7					2.1	17
PERIDINIUM	CEL									X
PERIDINIUM INCONSPICUUM	CEL			X	5	5.0	31			
PERIDINIUM WISCONSINENSE	CEL	1	20.1	52						
STAURASTRUM	CEL									X
SYNEDRA	CEL									X
SYNEDRA ? #2	CEL						X			
SYNEDRA #1	CEL					5.0	31			
TABELLARIA FENESTRATA	CEL			X						
TOTAL				259			615			828

LAKE NAME: HIGH FALLS LAKE
STORET NUMBER: 1319

NYGAARD TROPHIC STATE INDICES

DATE	06 22 73	09 08 73	11 08 73
MYXOPHYCEAN	4.50 E	4.00 E	1.67 E
CHLOROPHYCEAN	9.00 E	2.00 E	5.00 E
EUGLENOPHYTE	0.32 E	0.25 E	0.05 ?
DIATOM	0.67 E	0.12 ?	0.67 E
COMPOUND	18.5 E	8.00 E	7.67 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 22 73	09 08 73	11 08 73
GENUS	19	17	09
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 22 73	09 08 73	11 08 73
AVERAGE DIVERSITY	H	4.55	2.24	3.42
NUMBER OF TAXA	S	53.00	32.00	37.00
NUMBER OF SAMPLES COMPOSITED	M	3.00	3.00	3.00
MAXIMUM DIVERSITY	MAXH	5.73	5.00	5.21
TOTAL DIVERSITY	D	8608.60	27610.24	13717.62
TOTAL NUMBER OF INDIVIDUALS/ML	N	1892.00	12326.00	4011.00
EVENESS COMPONENT	J	0.79	0.45	0.66
MEAN NUMBER OF INDIVIDUALS/TAXA	L	35.70	385.19	108.41
NUMBER/ML OF MOST ABUNDANT TAXON	K	266.00	6995.00	828.00

LAKE NAME: HIGH FALLS LAKE CONTINUED
STORET NUMBER: 1319

TAXA	FORM	06 22 73 S	06 22 73 %C	06 22 73 ALGAL UNITS PER ML	09 08 73 S	09 08 73 %C	09 08 73 ALGAL UNITS PER ML	11 08 73 S	11 08 73 %C	11 08 73 ALGAL UNITS PER ML
ACHNANTHES MICROCEPHALA	CEL						X			
ACTINASTRUM HANTZSCHII	CEL									X
CHLAMYDOMONAS	CEL						X			X
CHLORELLA	CEL			X						
CHLOROPHYTAN CELL	CEL					0.6	69			
CHROOCOCCUS MINIMUS	COL					1.7	208			
COELASTRUM	COL						X			
COELASTRUM SPHAERICUM	COL		1.6	30						
COSMARIUM ?	CEL						X			X
CRUCIGENIA APICULATA	COL								1.1	44
CRYPTOMONAS	CEL	3	5.4	103		1.1	139	4	11.4	457
CRYPTOMONAS OVATA ?	CEL			X						
CYANOPHYTAN FILAMENT	FIL						X			
CYCLOTELLA	CEL		3.9	74			X			
CYCLOTELLA STELLIGERA	CEL			X						
DACTYLOCOCCOPSIS	CEL			X	1	55.7	6995	2	20.1	806
DACTYLOCOCCOPSIS IRREGULARIS	CEL		2.3	44						
DINOBRYON	CEL		0.8	15						
EUASTRUM DENTICULATUM	COL									X
EUGLENA	CEL	2	3.1	59						X
EUGLENA ACUS	CEL					0.6	69			
FLAGELLATE #1	CEL					0.6	69		3.3	131
FLAGELLATE #2	CEL					0.6	69			
FLAGELLATES	CEL							1	20.6	828
GLENODINIUM	CEL							5	6.5	261
GLOEOCYSTIS	COL		0.8	15						
GOLENKINIA	CEL	1	14.1	266						
GOLENKINIA PAUCISPINA	CEL			X						
GOLENKINIA RADIATA	CEL			X			X			
KIRCHNERIELLA	CEL			X						
KIRCHNERIELLA ?	CEL						X			
LEPOCINCLIS	CEL			X						

LAKE NAME: HIGH FALLS LAKE
STORET NUMBER: 1319

CONTINUED

TAXA	FORM	06 22 73 S	06 22 73 %C	06 22 73 ALGAL UNITS PER ML	09 08 73 S	09 08 73 %C	09 08 73 ALGAL UNITS PER ML	11 08 73 S	11 08 73 %C	11 08 73 ALGAL UNITS PER ML
LYNGBYA	FIL		2.3	44					1.1	44
LYNGBYA LIMNETICA	FIL				3	11.2	1385			
LYNGBYA SUBTILIS	FIL		13.3	251						
MALLOMONAS	CEL	4	3.1	59						
MELOSIRA DISTANS	CEL									X
MELOSIRA GRANULATA	CEL		2.3	44						
MERISMOPEDIA	COL		0.8	15						
MERISMOPEDIA MARSSONII	COL						X			
MERISMOPEDIA MINIMA	COL				5	4.5	554			
MERISMOPEDIA TENUISSIMA	COL			X						X
MESOSTIGMA VIRIDIS	CEL							3	10.9	436
MICROCYSTIS INCERTA	COL		7.0	133						
MOUGEOTIA	FIL			X						
NAVICULA	CEL		2.3	44						X
NAVICULA #1	CEL						X			
NAVICULA #2	CEL						X			
NAVICULA HUNGARICA	CEL						X			
NAVICULA VENTRALIS ?	CEL						X			
NEPHROCYTIUM AGARDHIANUM	COL								1.1	44
NITZSCHIA	CEL						X		6.5	261
NITZSCHIA HOLSATICA	CEL		5.4	103						
NITZSCHIA PALEA	CEL			X						
OOCYSTIS	CEL			X						
OSCILLATORIA	FIL		3.1	59	2	11.8	1454			X
PANDORINA	COL						X			
PANDORINA MORUM	COL								0.5	22
PEDIASTRUM DUPLEX	COL		0.8	15						
PEDIASTRUM TETRAS V. TETRAODON	COL		0.8	15						
PENNATE DIATOM	CEL					0.6	69			
PERIDINIUM	CEL		3.1	59					2.7	109
PHACUS	CEL	5	2.3	44						

LAKE NAME: HIGH FALLS LAKE
STORET NUMBER: 1319

CONTINUED

TAXA	FORM	06 22 73 S	06 22 73 %C	06 22 73 ALGAL UNITS PER ML	09 08 73 S	09 08 73 %C	09 08 73 ALGAL UNITS PER ML	11 08 73 S	11 08 73 %C	11 08 73 ALGAL UNITS PER ML
RAPHIDIOPSIS	FIL		0.8	15						
RAPHIDIOPSIS ?	FIL								3.3	131
RAPHIDIOPSIS CURVATA	FIL				4	6.2	762			
SCENEDESMUS #1	COL									X
SCENEDESMUS #2	COL								0.5	22
SCENEDESMUS ABUNDANS	COL									X
SCENEDESMUS ACUMINATUS F. TORTUOSUS	COL			X						
SCENEDESMUS BICAUDATUS	COL		0.8	15						
SCENEDESMUS BIJUGA	COL					0.6	69		0.5	22
SCENEDESMUS DENTICULATUS	COL									X
SCENEDESMUS DENTICULATUS V. LINEARIS	COL									X
SCENEDESMUS DIMORPHUS	COL									X
SCENEDESMUS INTERMEDIUS V. BALATONICUS F. HALOPHILUS	COL		0.8	15						
SCENEDESMUS INTERMEDIUS V. BICAUDATUS	COL									X
SCENEDESMUS QUADRICAUDA	COL		1.6	30					1.1	44
SCHROEDERIA	CEL		3.1	59						
STAURASTRUM	CEL						X			
STAURASTRUM #1	CEL		3.9	74						
STAURASTRUM LEPTOCLADUM	CEL		0.8	15						
STAURASTRUM TETRACERUM	CEL									X
STEPHANODISCUS	CEL								5.4	218
STEPHANODISCUS DUBIUS ?	CEL			X						
SYNEDRA	CEL					0.6	69		3.3	131
SYNEDRA RUMPENS V. SCOTIA	CEL			X						
SYNEDRA ULNA	CEL		2.3	44						
SYNURA UVELLA	CEL		1.6	30						
TABELLARIA	CEL		0.8	15						

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LAKE NAME: HIGH FALLS LAKE CONTINUED
STORET NUMBER: 1319

TAXA	FORM	06 22 73 S	%C	ALGAL UNITS PER ML	09 08 73 S	%C	ALGAL UNITS PER ML	11 08 73 S	%C	ALGAL UNITS PER ML
TETRAEDRON HASTATUM	CEL			X						
TETRAEDRON PLANCTONICUM	CEL									X
TETRAEDRON REGULARE V. INCLS	CEL									X
TETRASTRUM HETERACANTHUM	COL			X						X
TRACHELOMONAS	CEL					2.8	346			
TRACHELOMONAS GRANULOSA V. SUBGLOBOSA	CEL		0.8	15						
TRACHELOMONAS HISPIDA	CEL		0.8	15						
TRACHELOMONAS HISPIDA V. GRANULATA	CEL			X						
TRACHELOMONAS SCHAUINSLANDII	CEL		0.8	15						
TRACHELOMONAS VOLVOCINA	CEL		2.3	44			X			
TOTAL				1892			12326			4011

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